

No. 5 CROSSBAR SWITCHING SYSTEM

WIRE SPRING RELAY TYPE CIRCUITS

VOLUME II

SEQUENCE CHARTS, OPERATIONAL SKETCHES

AND REFERENCE MATERIAL



PRINTED
IN
U.S.A.

MARCH, 1955

THE SYMBOLS AND DESIGNATIONS USED IN THE PREPARATION OF THESE
SEQUENCE CHARTS AND OPERATIONAL SKETCHES ARE CONTAINED IN
BELL SYSTEM PRACTICE SECTION 950.701.01

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WIRE SPRING RELAY TYPE CIRCUITS

VOLUME II

SEQUENCE CHARTS, OPERATIONAL SKETCHES

AND REFERENCE MATERIAL

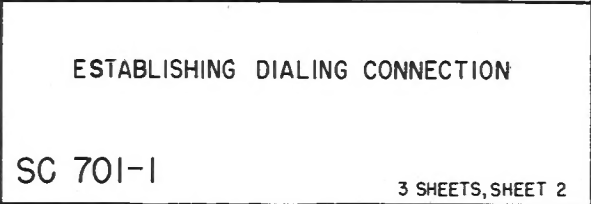


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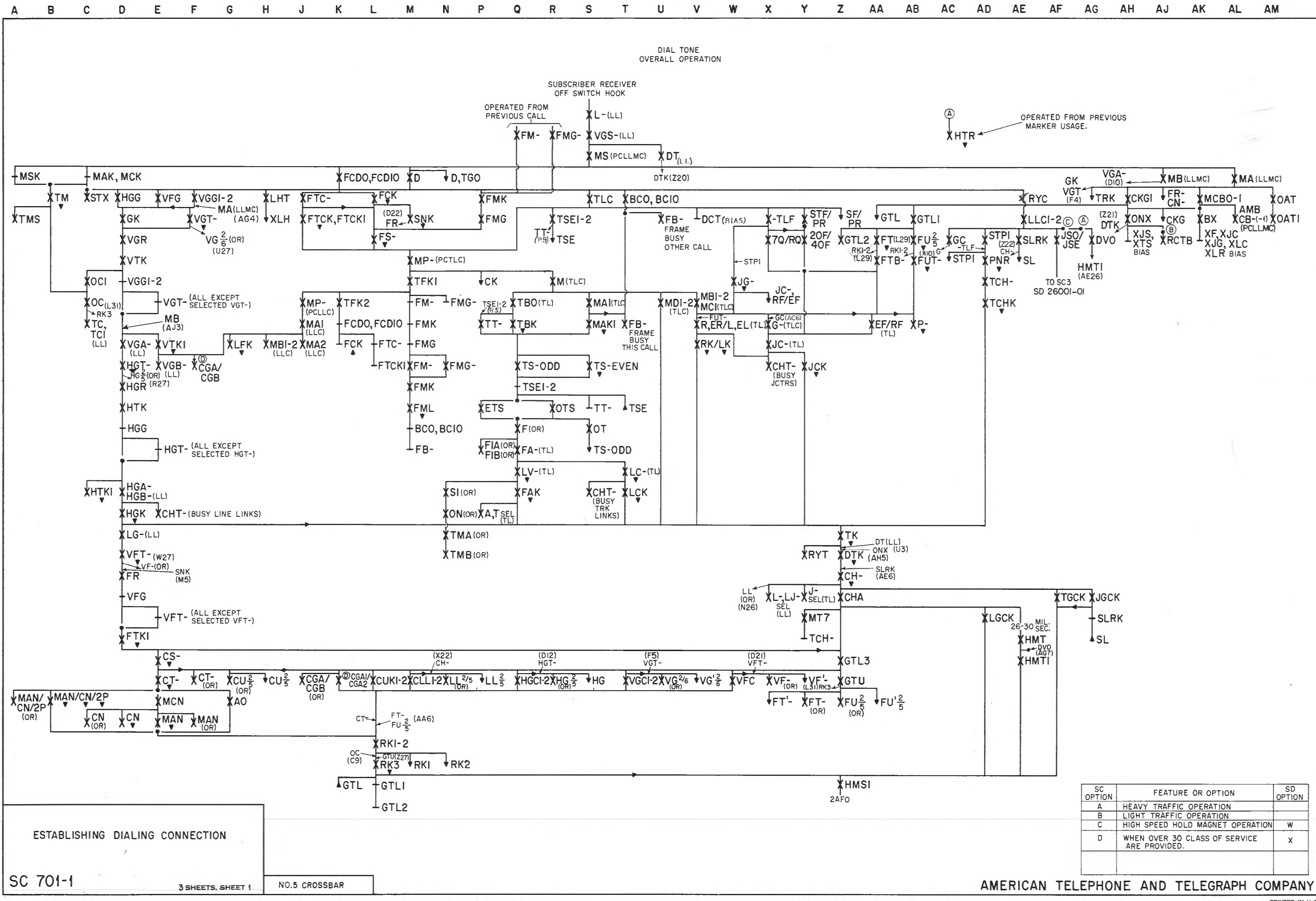
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AMERICAN TELEPHONE AND TELEGRAPH COMPANY



ESTABLISHING DIALING CONNECTION

SC 701-1

3 SHEETS, SHEET 1

NO.5 CROSSBAR

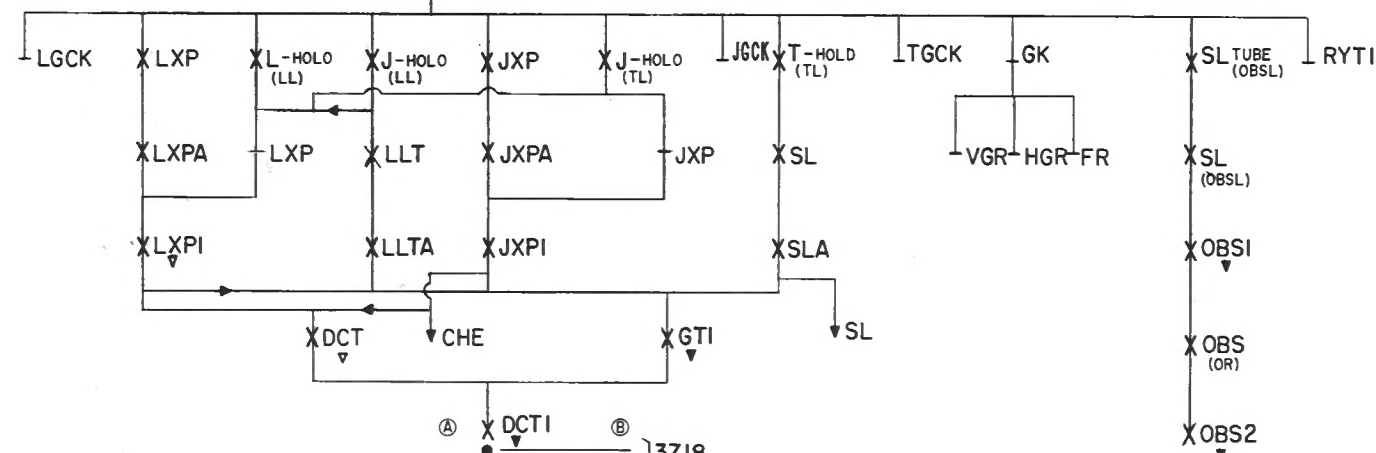
SC OPTION	FEATURE OR OPTION	SD OPTION
A	HEAVY TRAFFIC OPERATION	
B	LIGHT TRAFFIC OPERATION	
C	HIGH SPEED HOLD MAGNET OPERATION	W
D	WHEN OVER 30 CLASS OF SERVICE ARE PROVIDED.	X

(CONTINUED)
DIAL TONE
OVERALL OPERATION

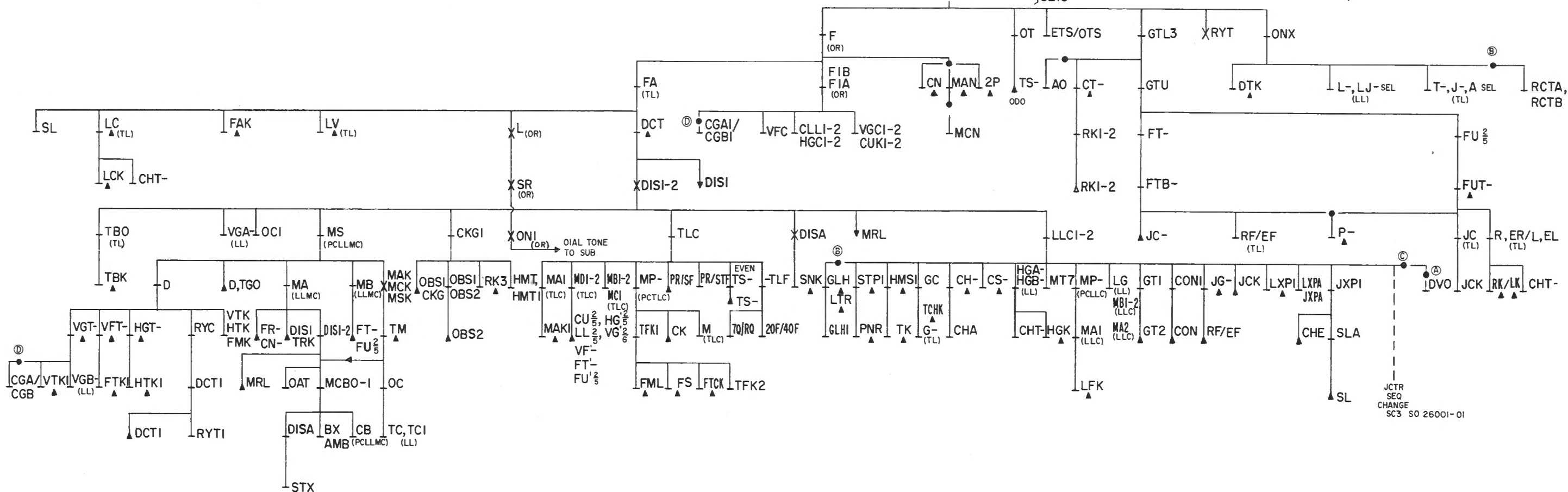
IZ32

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3Z18



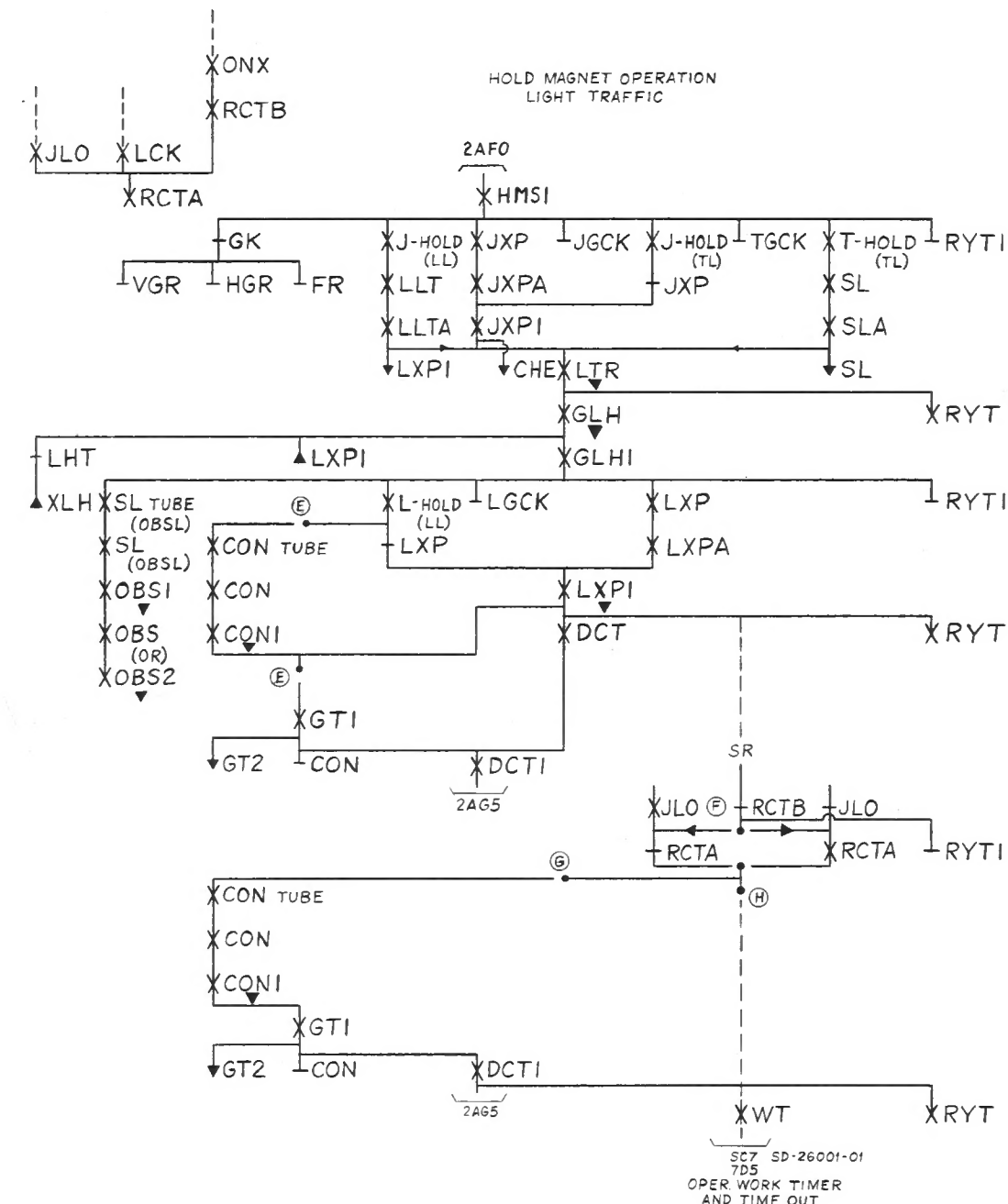
JCTR
SEQ
CHANGE
SC3 SO 26001-01

SC OPTION	FEATURE OR OPTION	SD OPTION
A	HEAVY TRAFFIC OPERATION	
B	LIGHT TRAFFIC OPERATION	
C	HIGH SPEED HOLD MAGNET OPERATION	W
D	WHEN OVER 30 CLASS OF SERVICE ARE PROVIDED.	X

A B C D E F G H J K L M N P Q R S T U V W X Y Z AA AB AC AD

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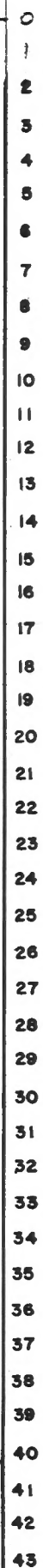
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SC OPTION	FEATURE
E	CON. TEST SUCCESSFUL
F	CON. TEST FAILURE, TIP AND RING LEADS REVERSED.
G	CON. TEST SUCCESSFUL WITH TIP AND RING LEADS REVERSED.
H	CON. TEST FAILURE WITH TIP AND RING LEADS REVERSED. TIME OUT.

A B C D E F G H J K L M N P Q R S T U V W X Y Z AA AB AC AD

FROM SCTOI-1



(SECOND JUNCTION RETEST)

FROM SC7021X42

10 TRK. LK. FR.

ALL CHANNELS BUSY

↓

ONE OR MORE
IDLE CHANNELS

X RYT

H- TO
SC 701-1
1Z22

X STP3

+STPI

+ PA/PNR

+TCH- +

+ TCHK +

TK

DTK X

SC 1

$\downarrow V_{EM}$

YBAM

		CS-	
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1 LG
(LL)

JCTR.
SEQ

SD-26001-01

SC OPTION	FEATURE OR OPTION	SD OPTION
A	HEAVY TRAFFIC OPER.	
B	LIGHT TRAFFIC OPER.	
C	HIGH SPEED HOLD MAG. OPER.	W
D	WHEN OVER 30 CLASS OF SERVICE ARE PROVIDED	X

DIAL TONE MARKER

SECOND JUNCTOR RETEST AND ROUTE ADVANCE

ALL REGISTER BUSY

NO 5 CROSSBAR

SC 703-1

ALL REGISTER BUSY

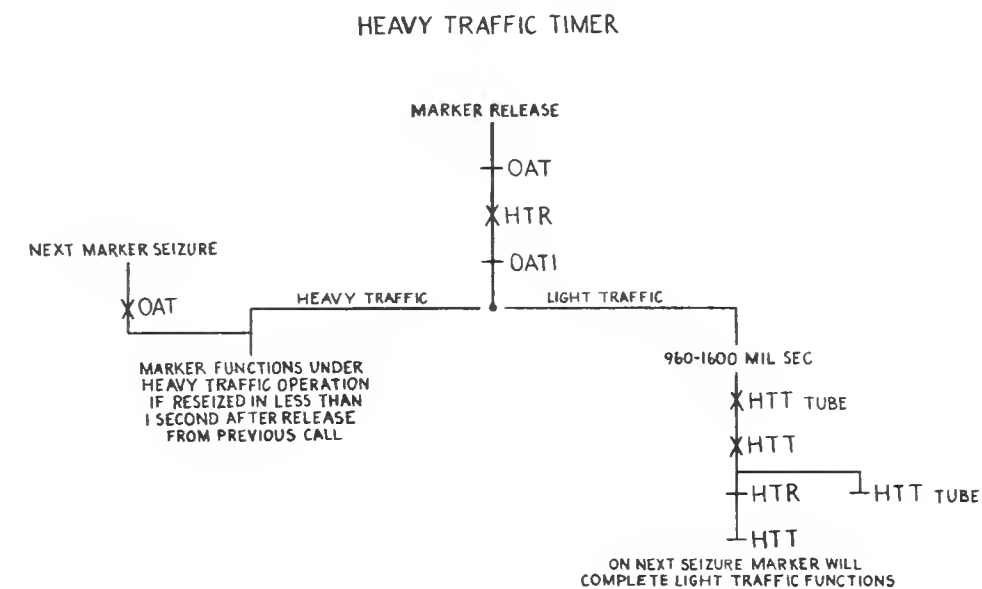
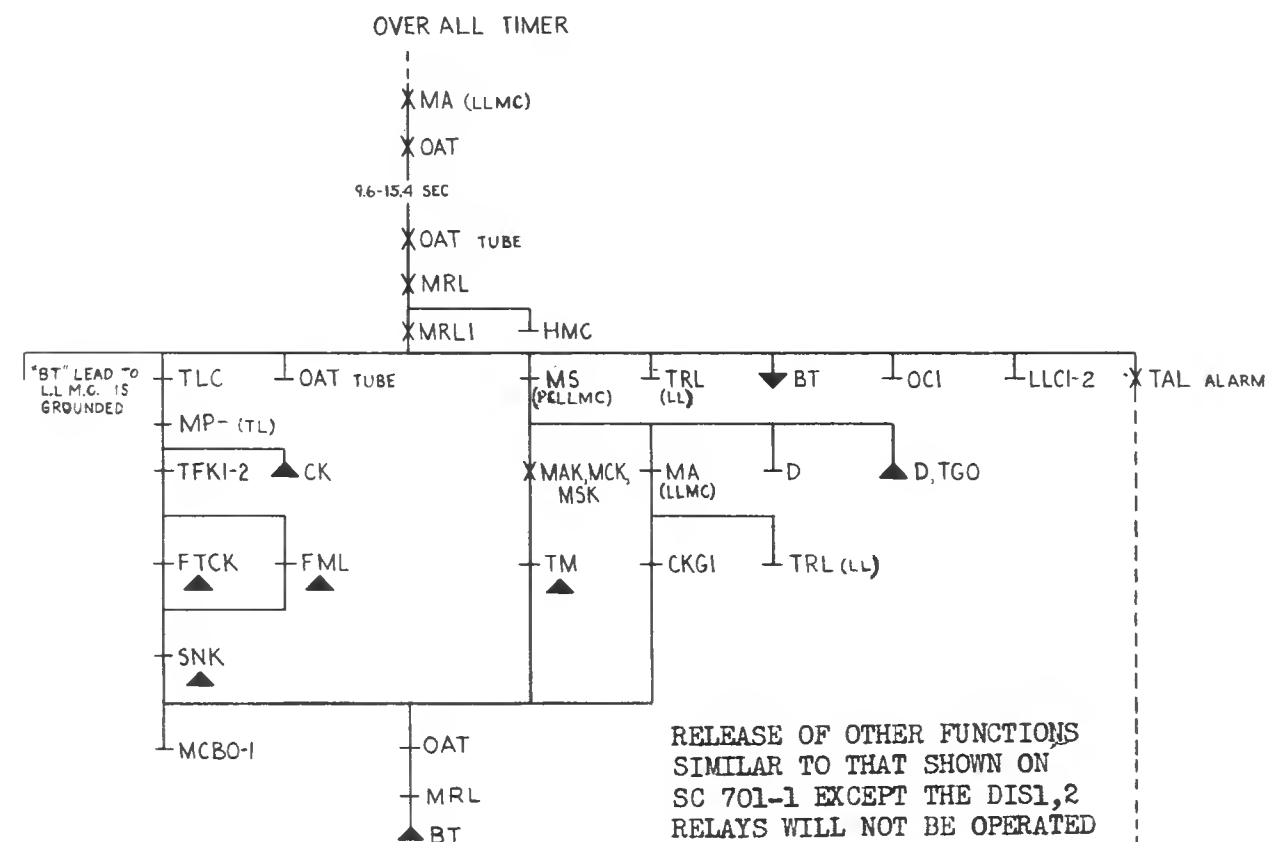
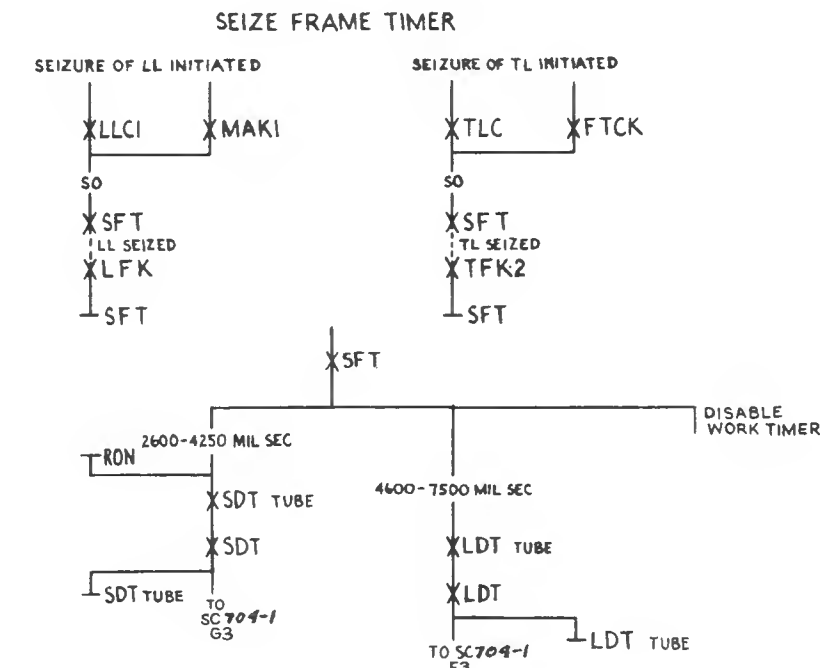
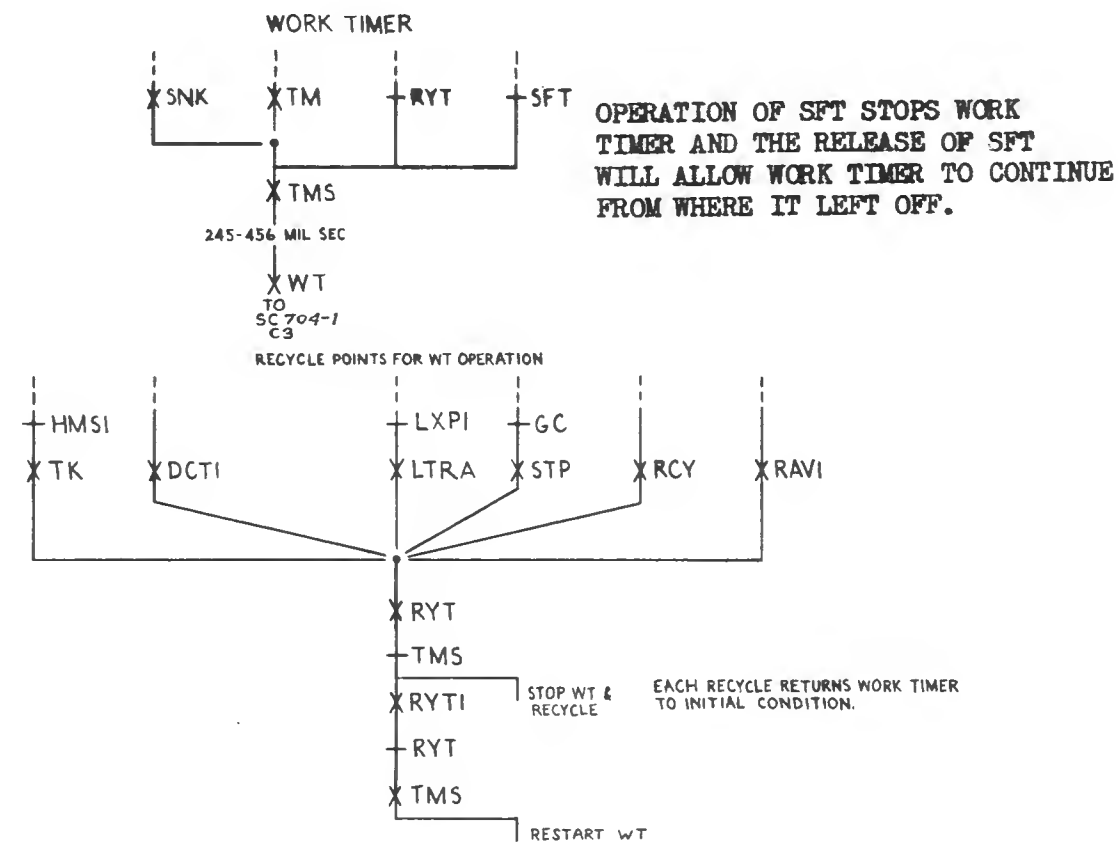
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AH	AJ	AK	AL	AM	AN	AP	AQ	AR	AS	AT
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DIAL TONE MARKER

OPERATION OF TROUBLE RECORDER

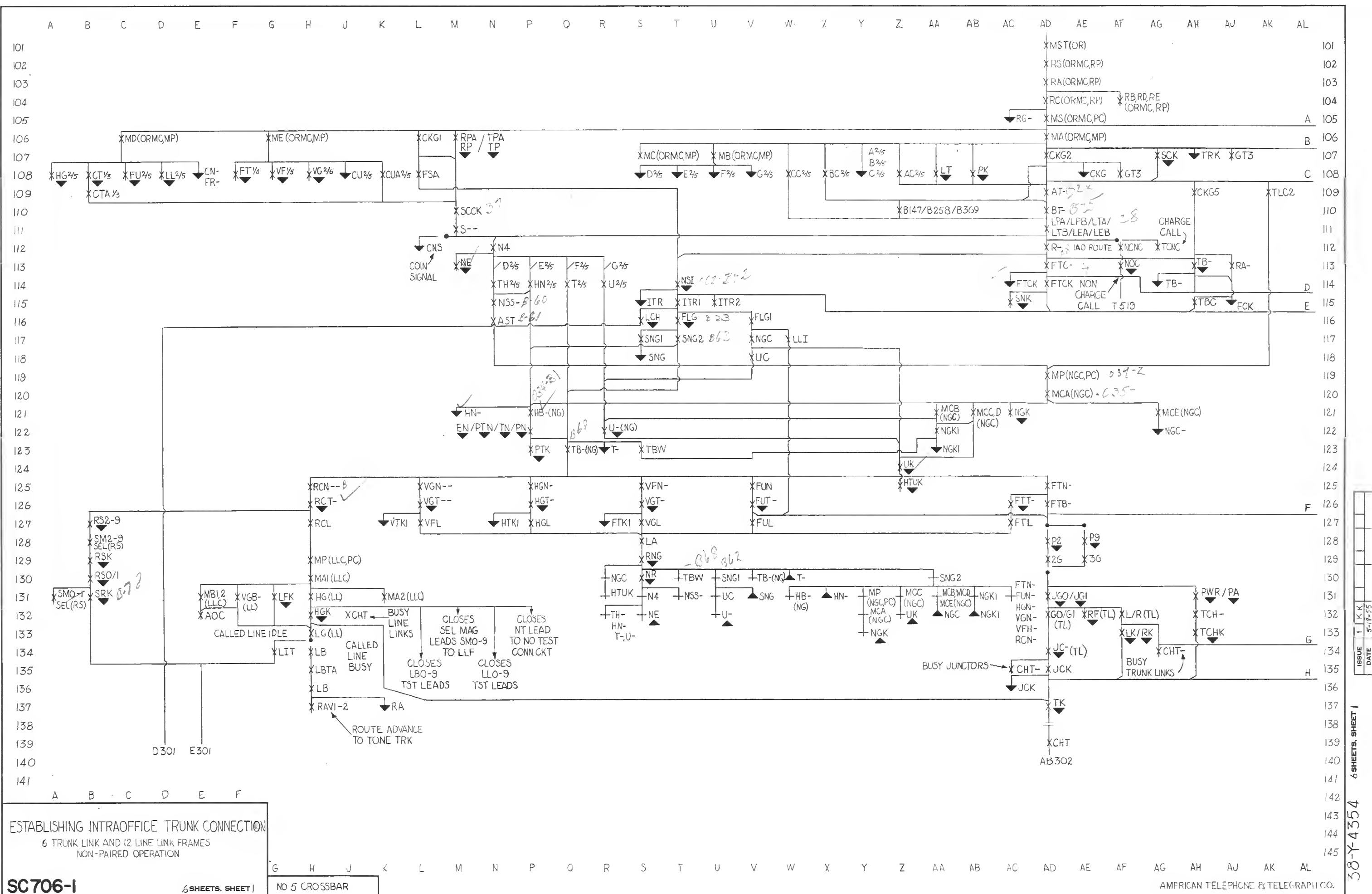


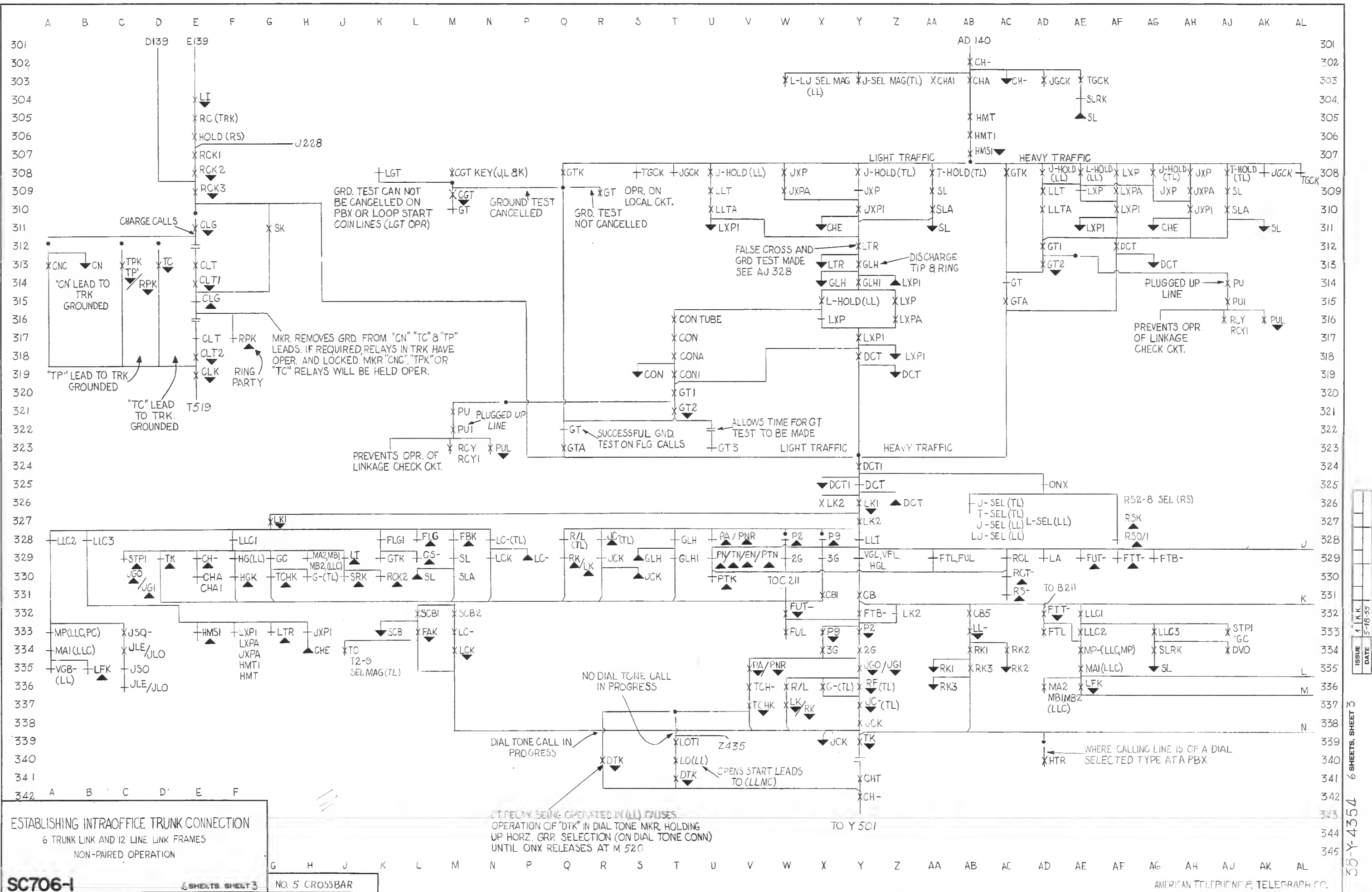


DIAL TONE MARKER
TIME OUT

NO 5 CROSSBAR

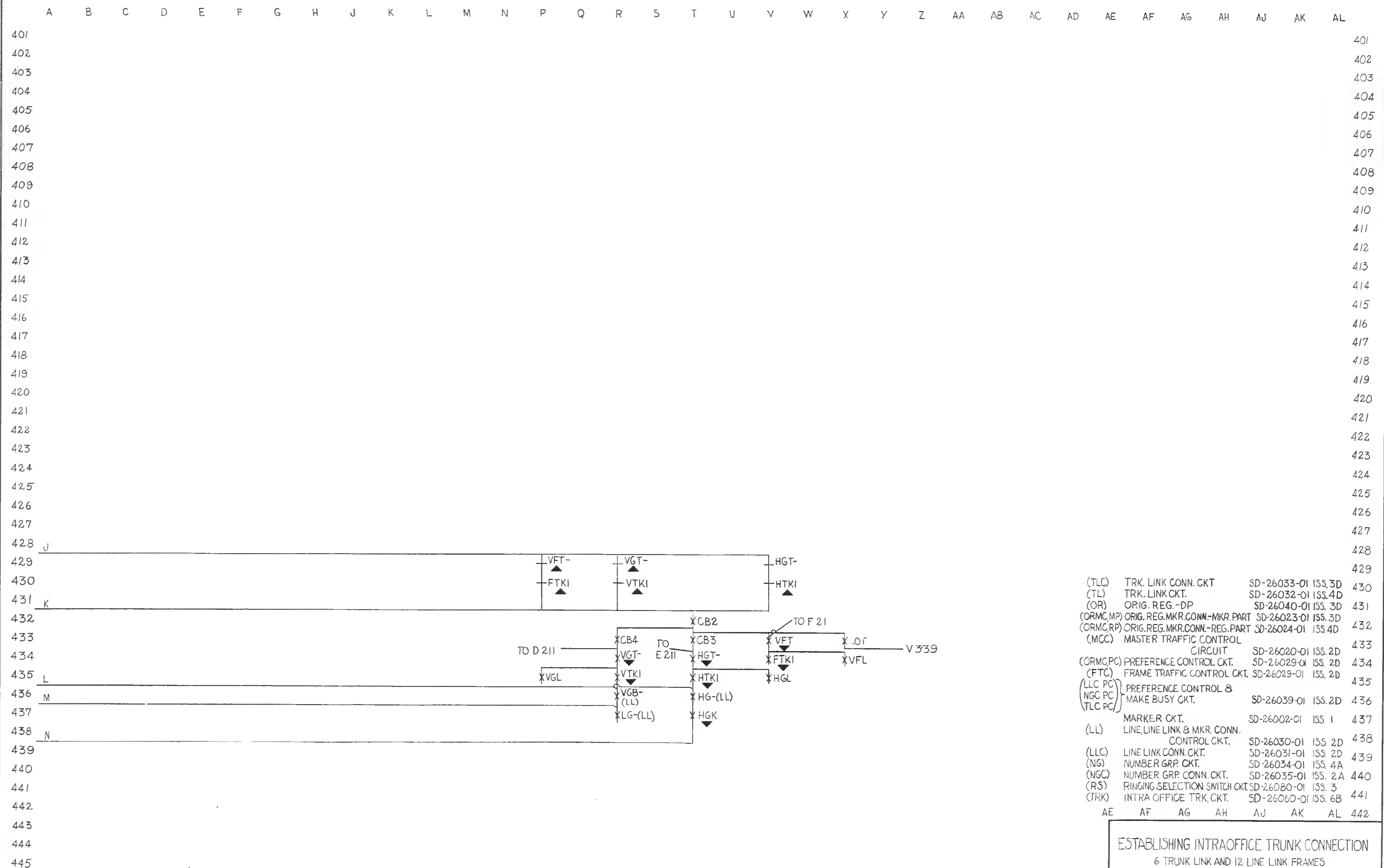
SC 705-1





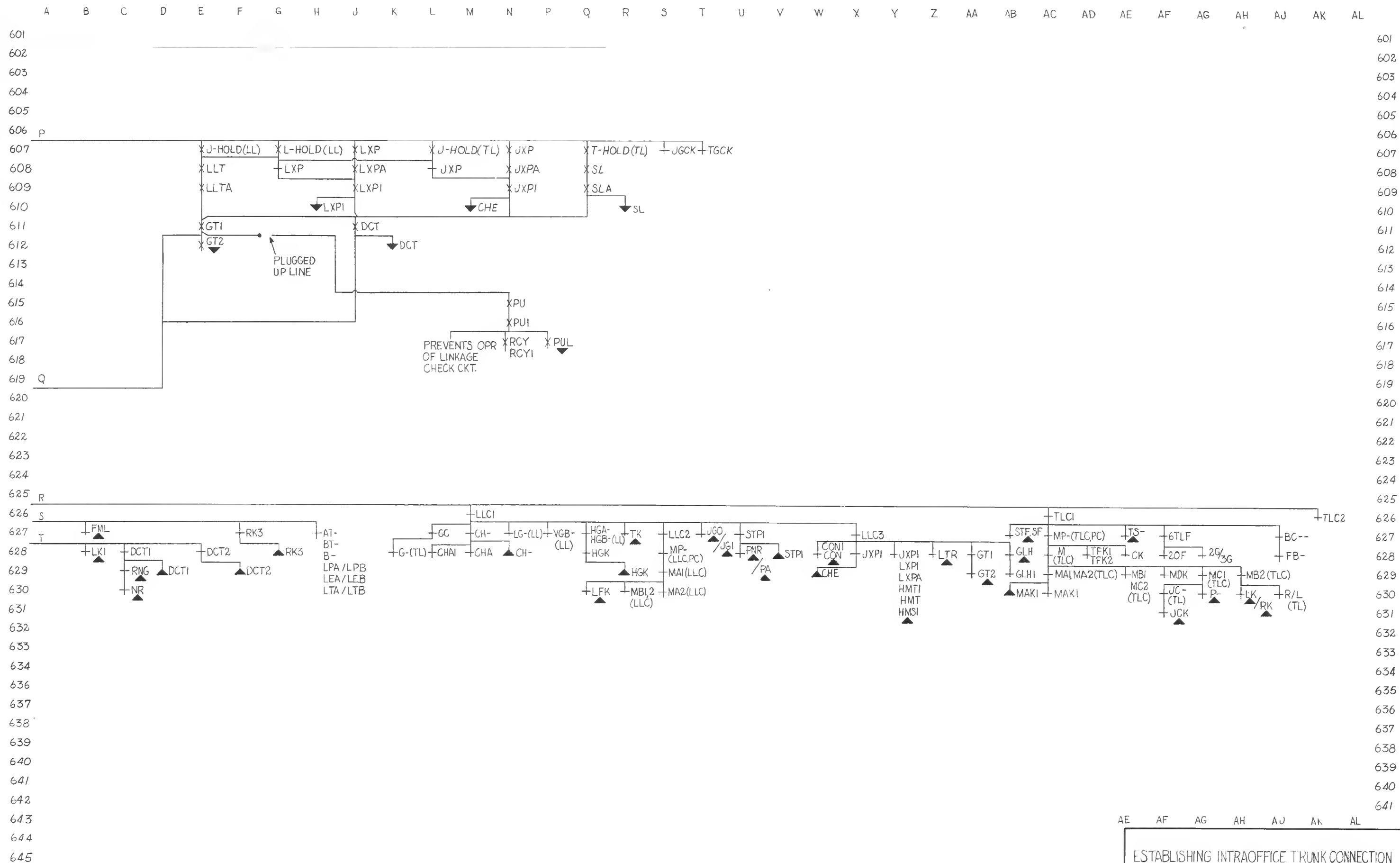
38-V-4354 6 SHEETS, SHEET 4

ISSUE	1	K	K
DATE	5-17-55		



- (TLC) TRK. LINK CONN. CKT SD-26033-01 ISS. 3D 430
- (TL) TRK. LINK CKT. SD-26032-01 ISS. 4D 430
- (OR) ORIG. REG.-DP SD-26040-01 ISS. 3D 431
- (ORMC,MP) ORIG. REG.MKR.CONN.-MKR.PART SD-26023-01 ISS. 3D 432
- (ORMC,RP) ORIG. REG.MKR.CONN.-REG.PART SD-26024-01 ISS. 4D 432
- (MCC) MASTER TRAFFIC CONTROL CIRCUIT SD-26020-01 ISS. 2D 433
- (ORMC,PC) PREFERENCE CONTROL CKT. SD-26029-01 ISS. 2D 434
- (FTC) FRAME TRAFFIC CONTROL CKT. SD-26029-01 ISS. 2D 435
- (LLC PC) PREFERENCE CONTROL & MAKE BUSY CKT. SD-26039-01 ISS. 2D 436
- (NGC PC) MAKE BUSY CKT. SD-26039-01 ISS. 2D 436
- (TLC PC) MAKE BUSY CKT. SD-26039-01 ISS. 2D 436
- (LL) MARKER CKT. SD-26002-01 ISS. 1 437
- (LL) LINE,LINE LINK & MKR. CONN. CONTROL CKT. SD-26030-01 ISS. 2D 438
- (LLC) LINE LINK CONN. CKT. SD-26031-01 ISS. 2D 439
- (NG) NUMBER GRP. CKT. SD-26034-01 ISS. 4A 440
- (NGC) NUMBER GRP. CONN. CKT. SD-26035-01 ISS. 2A 440
- (RS) RINGING SELECTION SWITCH CKT. SD-26080-01 ISS. 3 441
- (TRK) INTRA OFFICE TRK. CKT. SD-26060-01 ISS. 6B 441

ISSUE	1	K K				
DATE	5-18-55					



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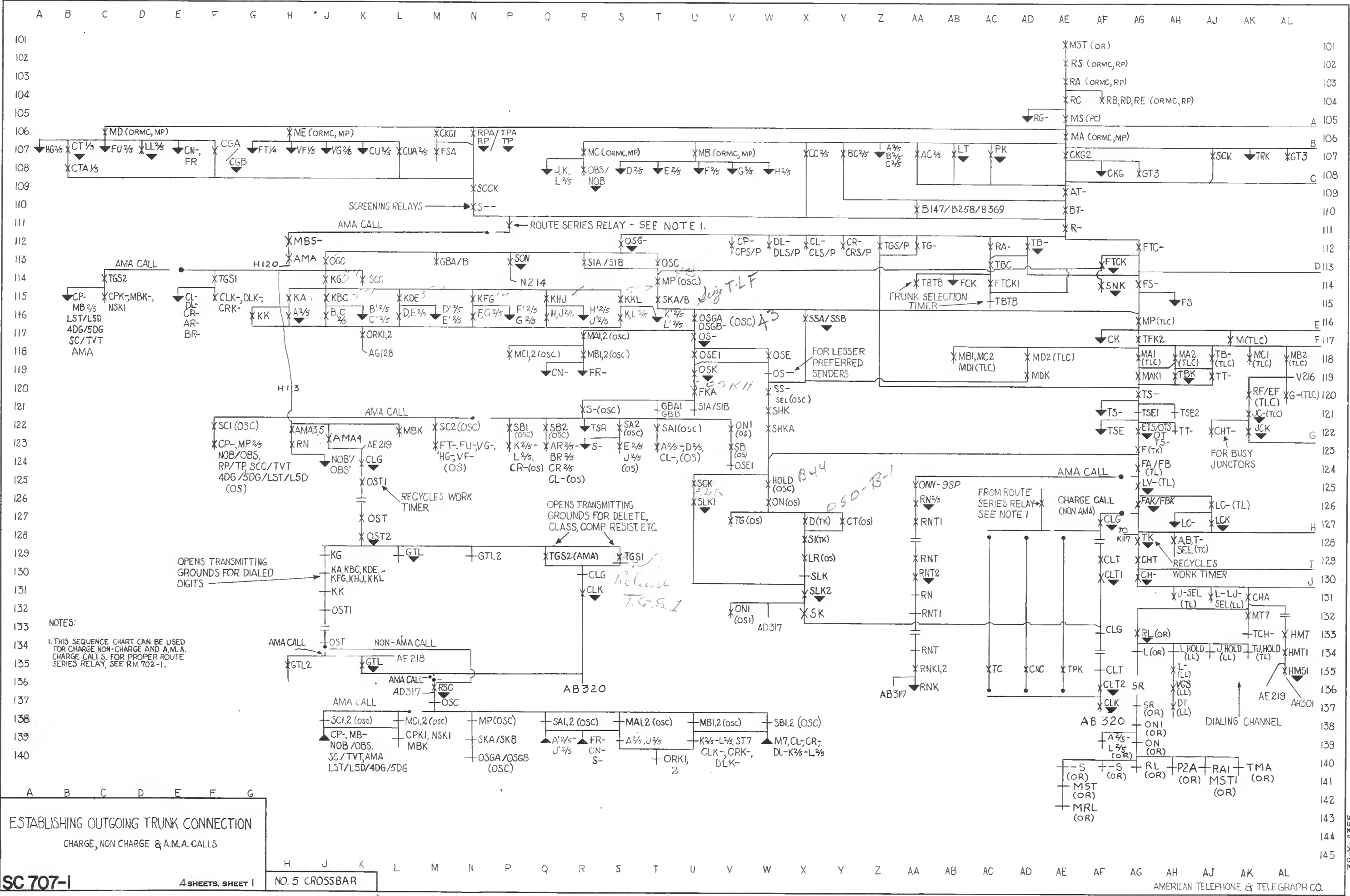
ESTABLISHING INTRAOFFICE TRUNK CONNECTION

6 TRUNK LINK AND 12 LINE LINK FRAMES

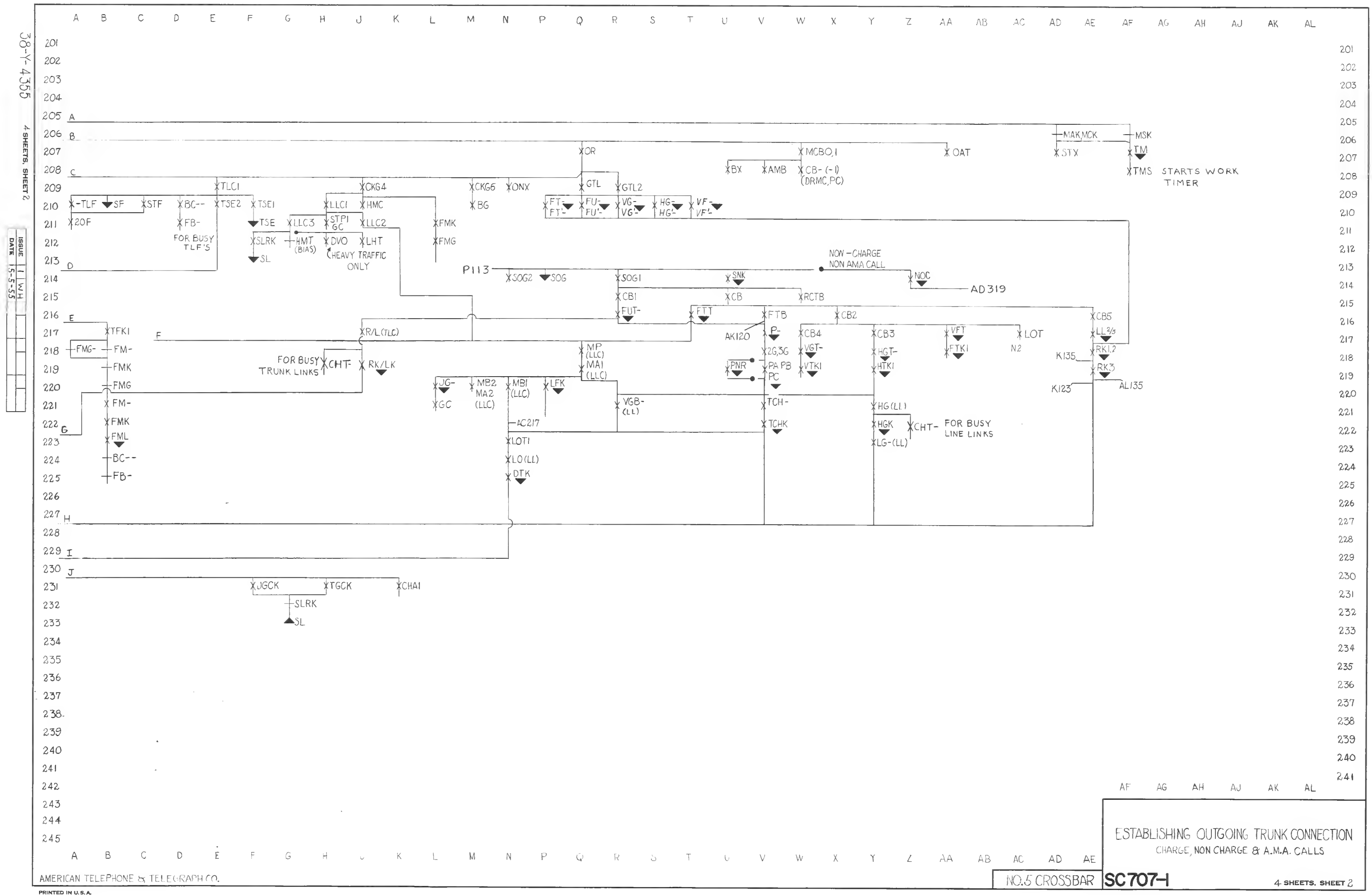
NON-PAIRED OPERATION

SC 706-1

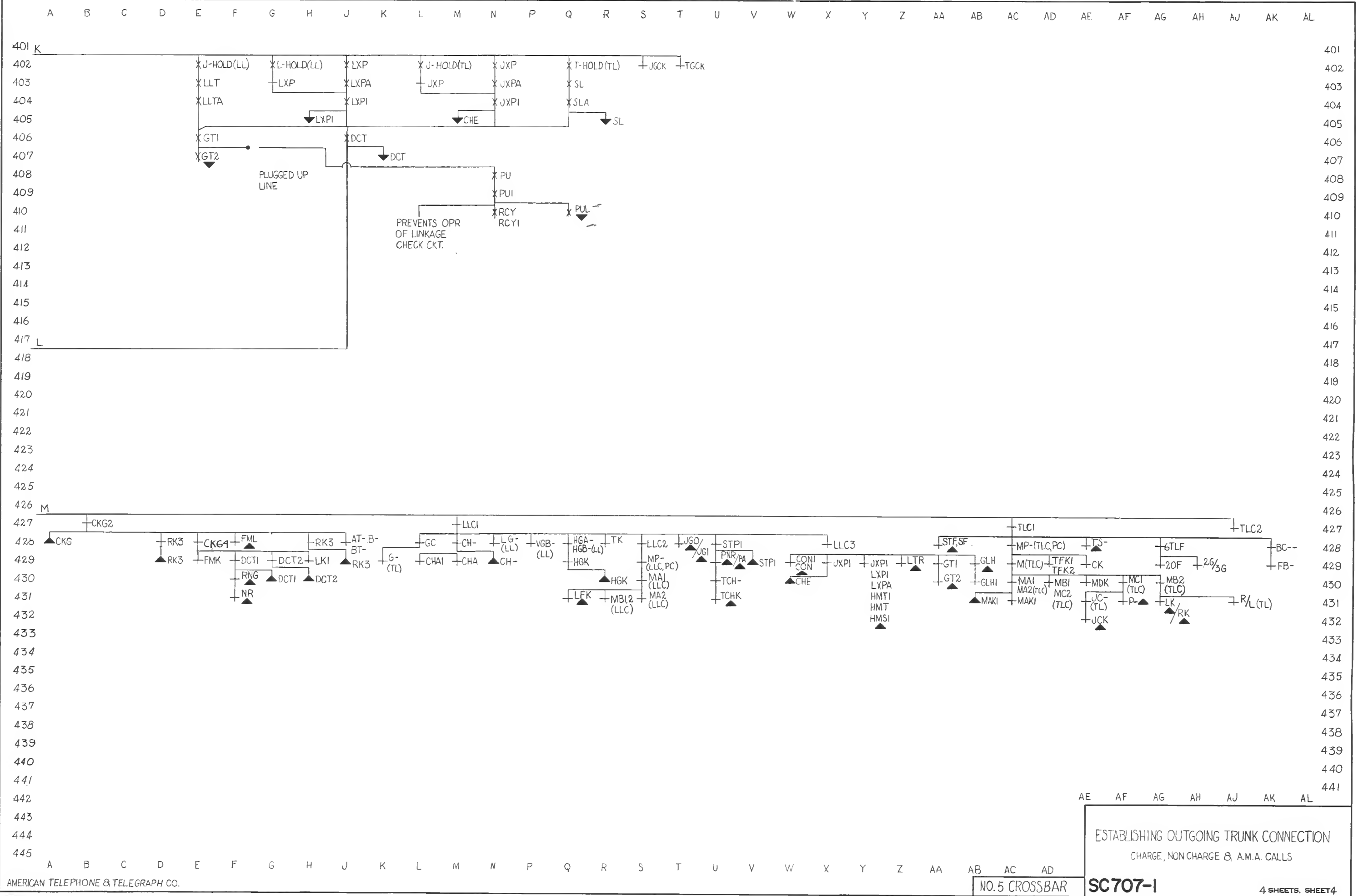
6 SHEETS, SHEET 6

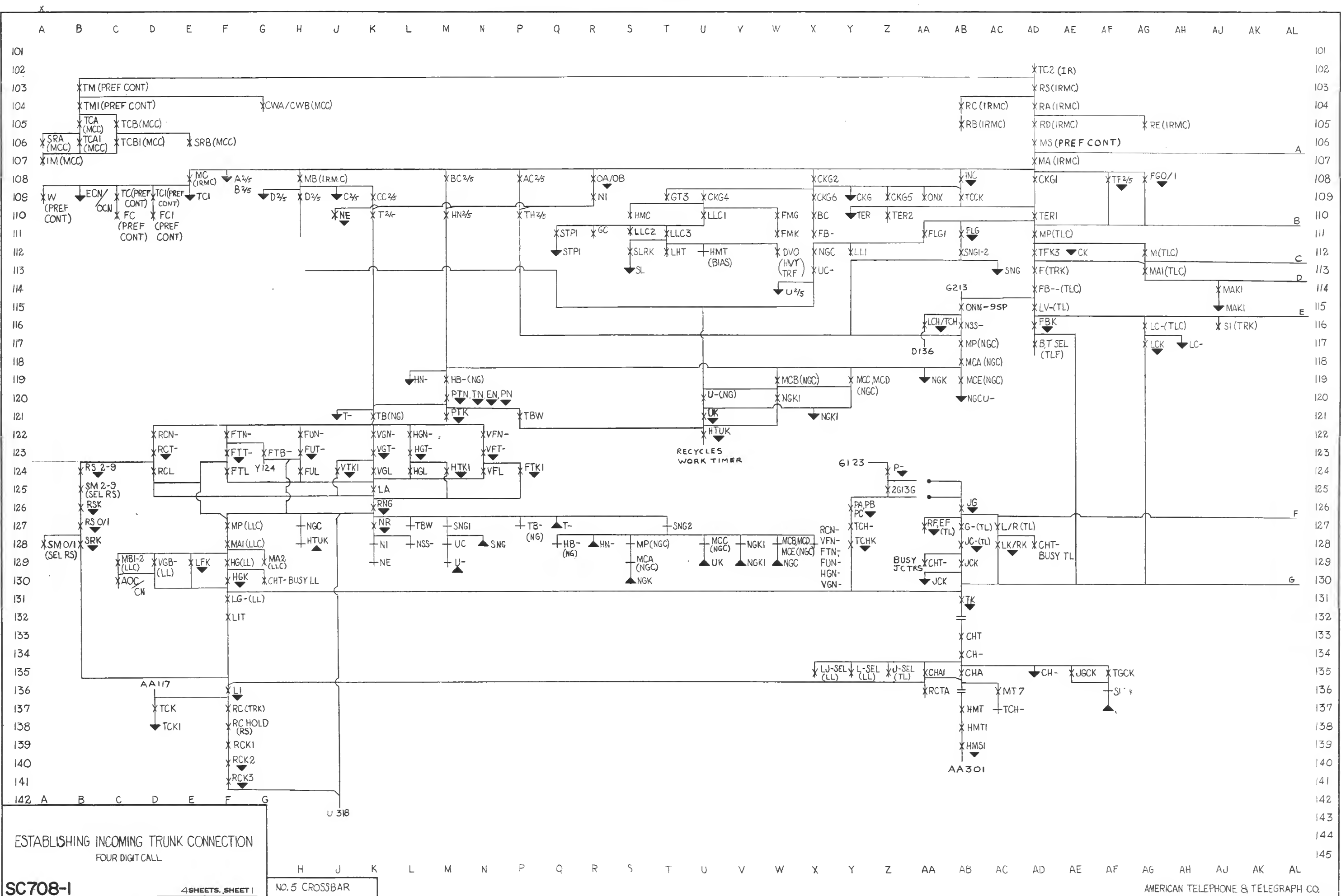


ESTABLISHING OUTGOING TRUNK CONNECTION
CHARGE, NON CHARGE & A.M.A. CALLS



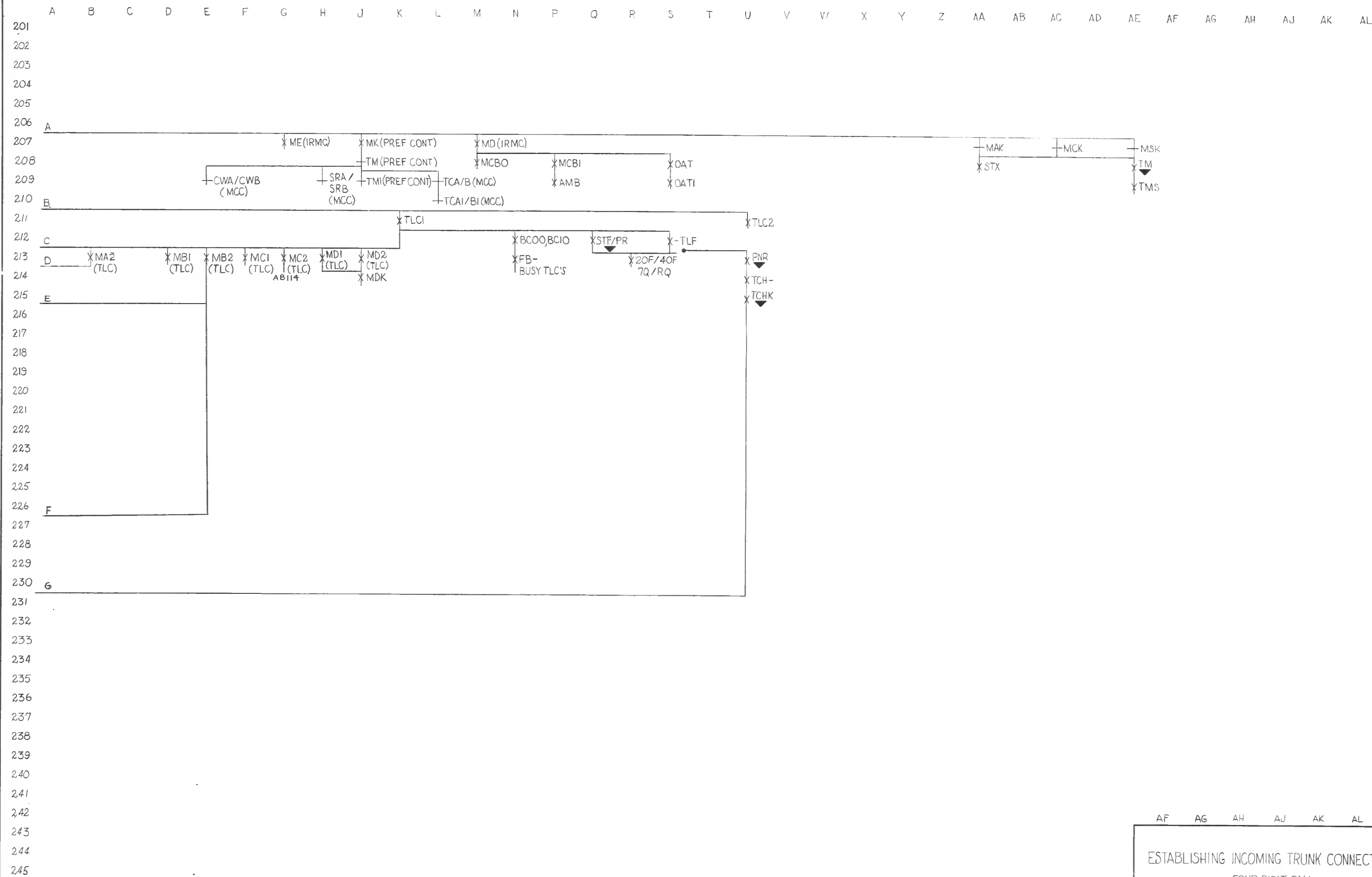
ISSUE	1	W H			
DATE	5-5-55				





4 SHEETS, SHEET 2

ISSUE	1	W H			
DATE	5-18-65				



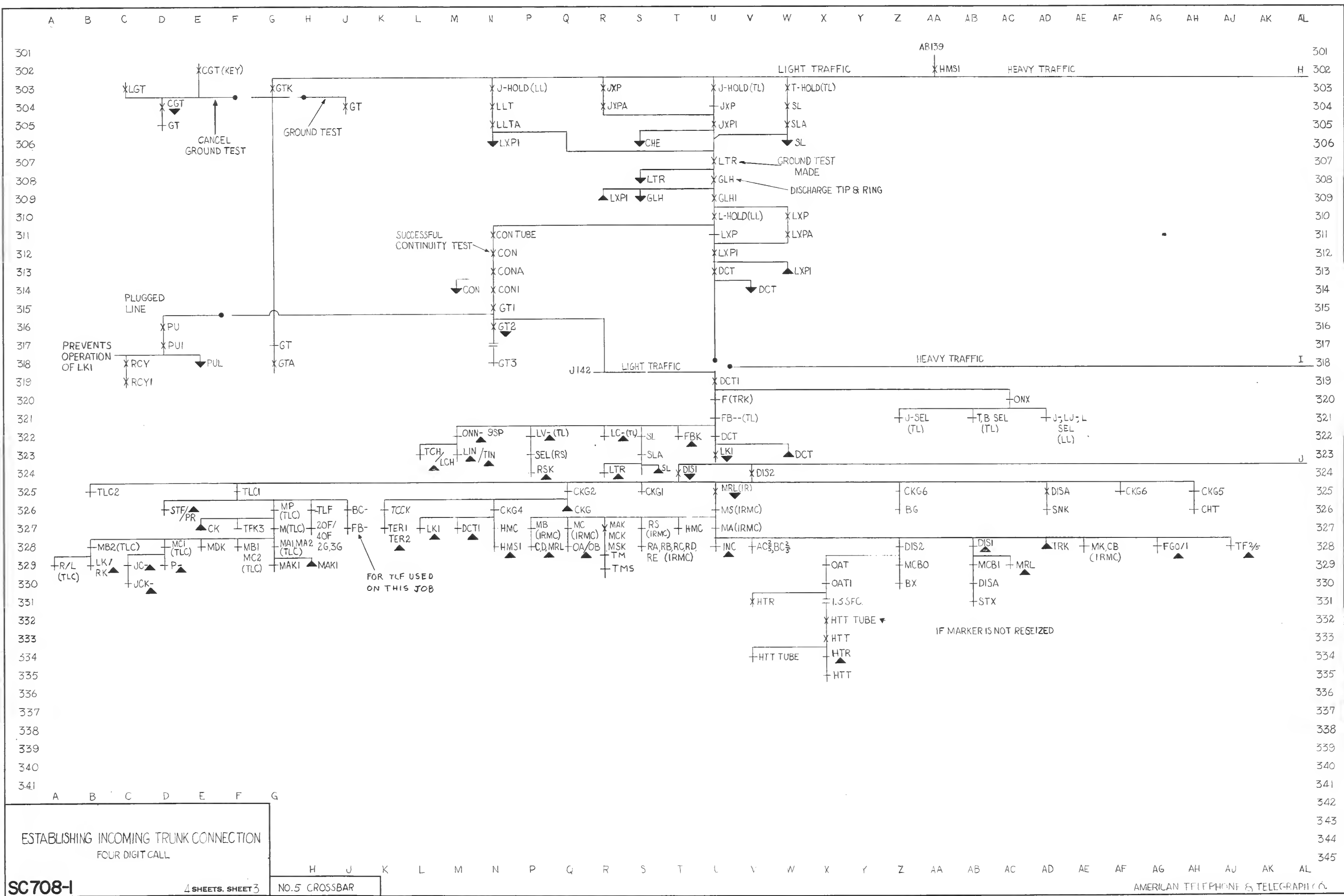
AMERICAN TELEPHONE & TELEGRAPH CO.

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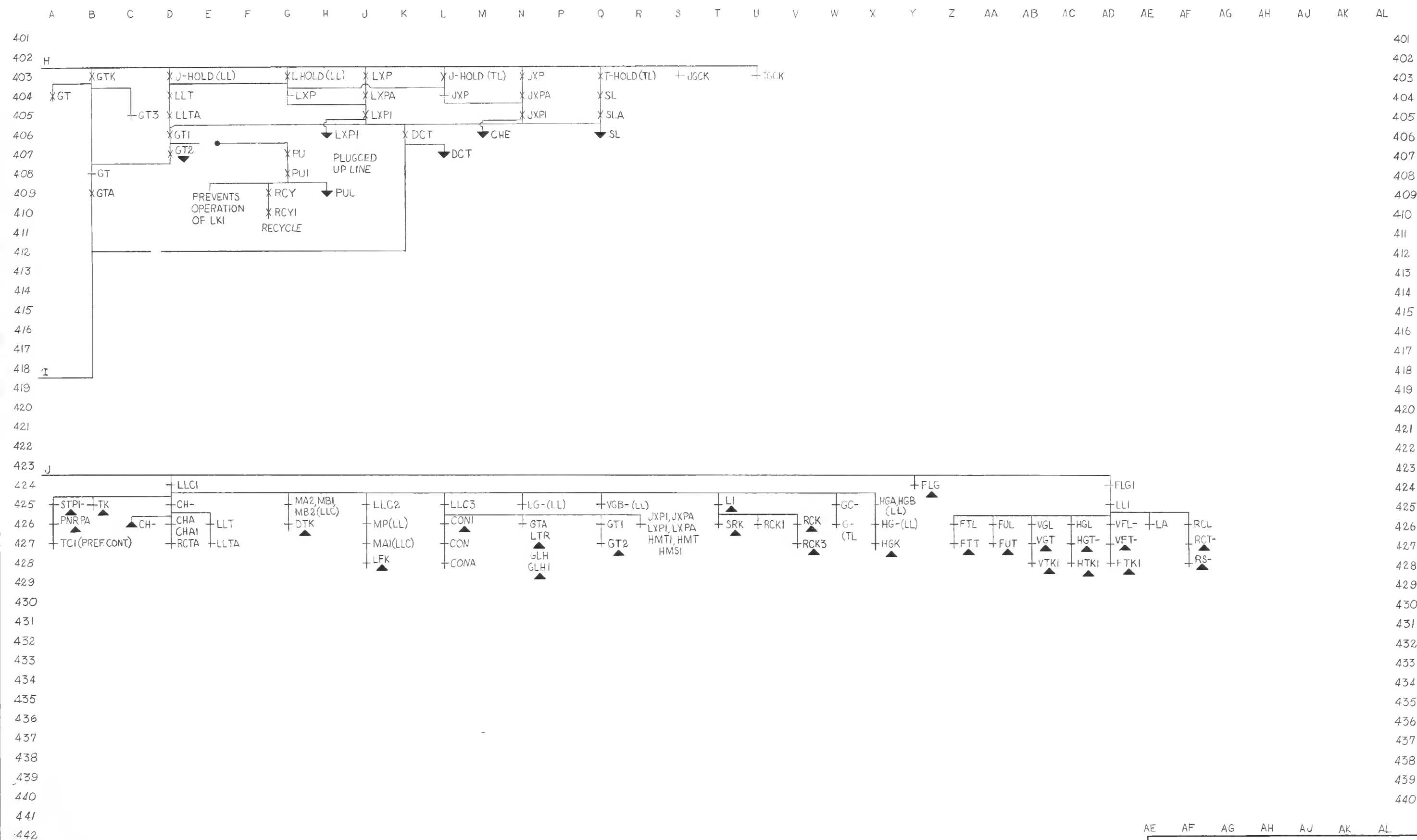
NO. 5 CROSSBAR

SC708-I

4 SHEETS, SHEET 2



ISSUE	1	W H				
DATE	5-18-55					



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ESTABLISHING INCOMING TRUNK CONNECTION

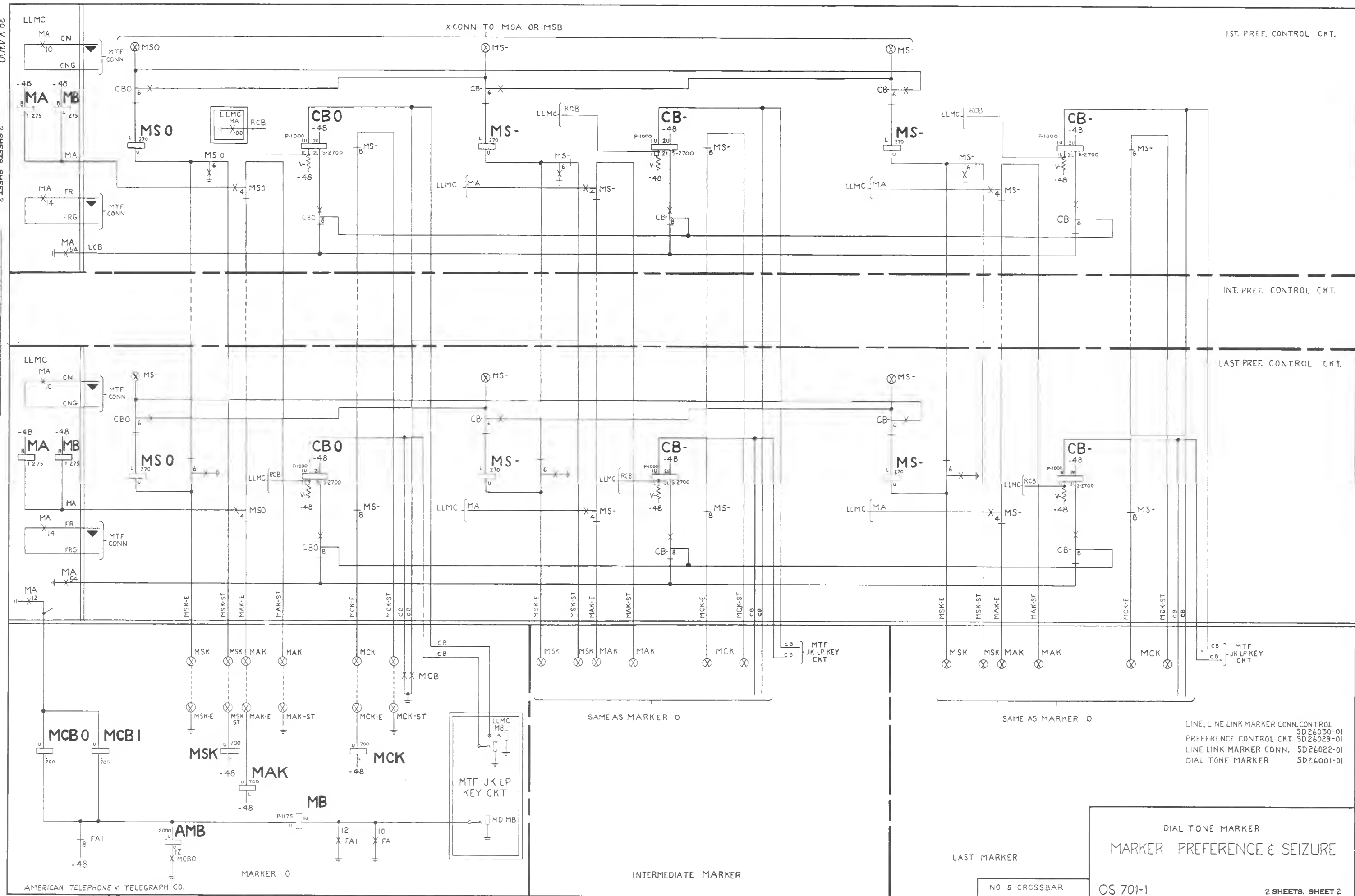
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AMERICAN TELEPHONE & TELEGRAPH CO.

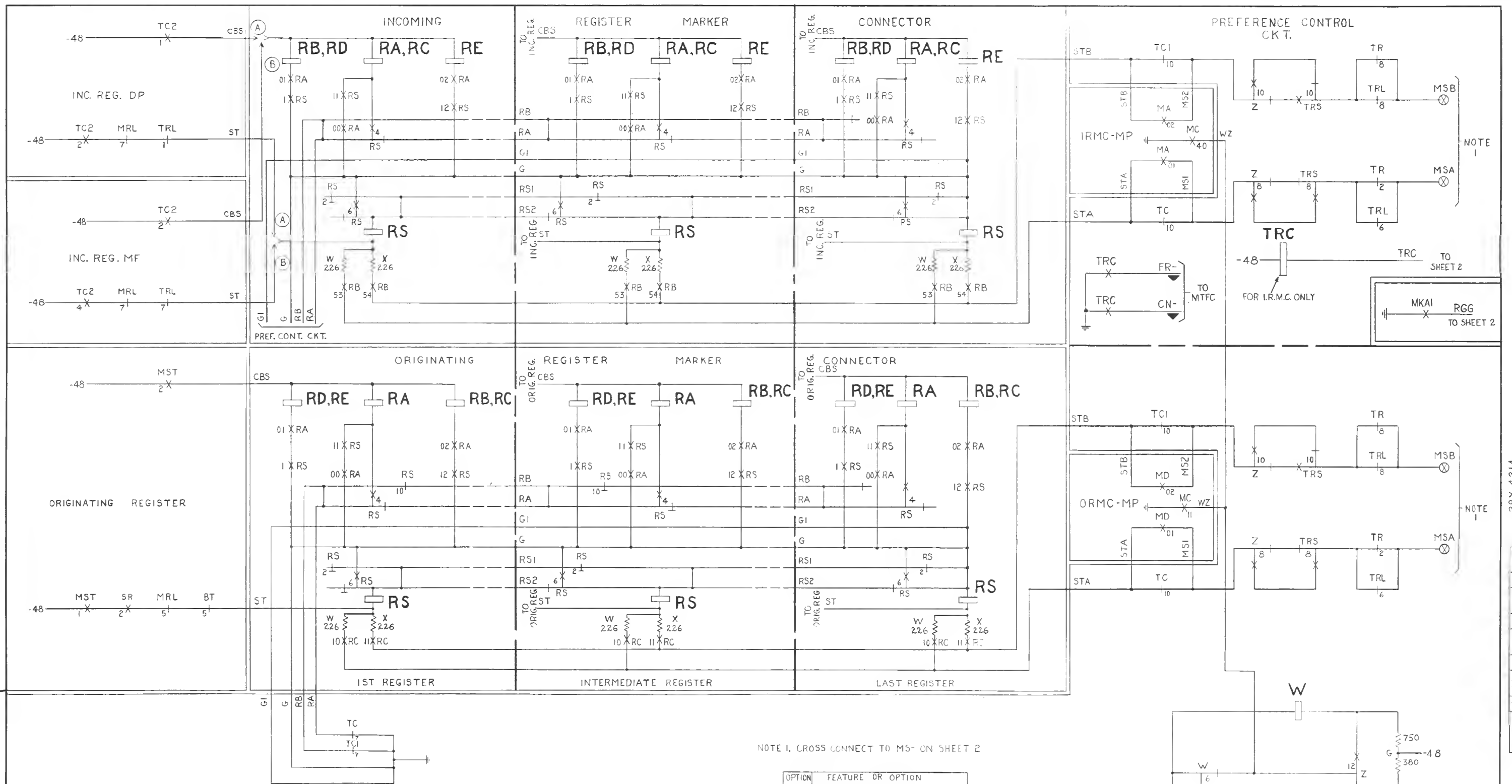
PRINTED IN U.S.A.

NO. 5 CROSSBAR

SC708-1

SHEETS SHEET





INC. REG-DIAL PULSING SD-26041-01 ISS. 3D
 INC. REG-MULTIFREQUENCY SD-26042-01 ISS. 3D
 ORIG. REG-DIAL PULSING SD-26040-01 ISS. 3D
 INC. REG. MARKER CONN - REG PART SD-26026-01 ISS. 4D
 INC. REG. MARKER CONN. - MKR PART SD-26025-01 ISS. 2D
 COMPLETING MARKER SD-26002-01 ISS. 1
 PREFERENCE CONTROL CKT. FOR MKR. CONN. SD-26029-01 ISS. 2D

COMPLETING MARKER
 MARKER PREFERENCE & SEIZURE

OS-701-2

2 SHEETS, SHEET 1

NO 5 CROSSBAR

PREFERENCE CONTROL CIRCUIT

AMERICAN TELEPHONE & TELEGRAPH CO.

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38Y-4314

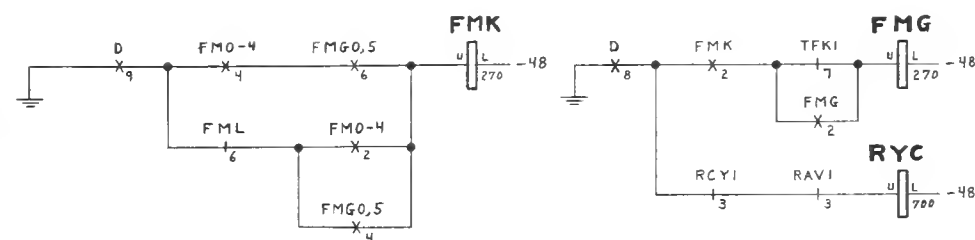
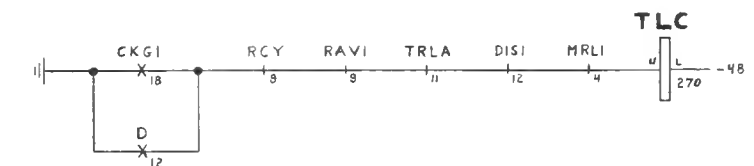
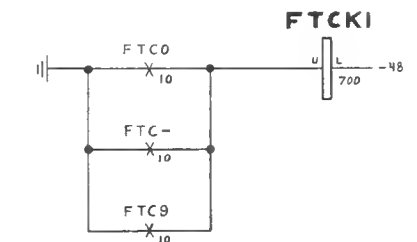
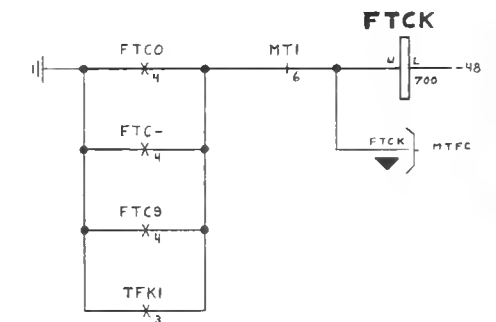
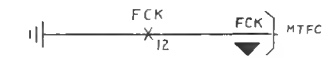
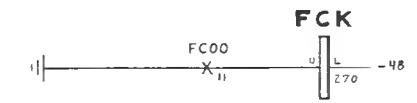
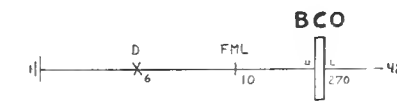
ISSUE DATE 4-17-55

2 SHEETS, SHEET 1

NOTES.

1. LEADS ARE USED WHEN OFFICE IS PROVIDED WITH MORE THAN 10 TRK. LINK FRAMES. SEE SD 26001-01 FS2.
2. CROSS-CONNECT OF TO OFO AND EF TO EFO FOR 10 OR LESS TRK. LINK FRAMES.
3. FOR EACH TRUNK LINK FRAME, CROSS CONNECT THE "FT" TERM. OF THE DP. ORIG. REGISTERS, TO THE "D" TERM. SEE SD 26032-01 G2 CAD6.

MARKER



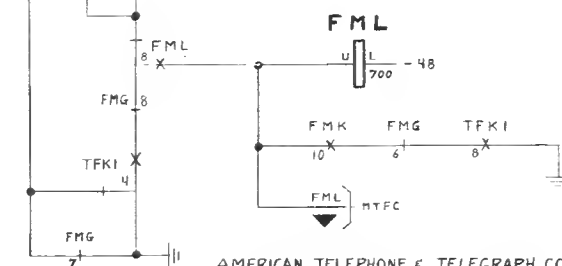
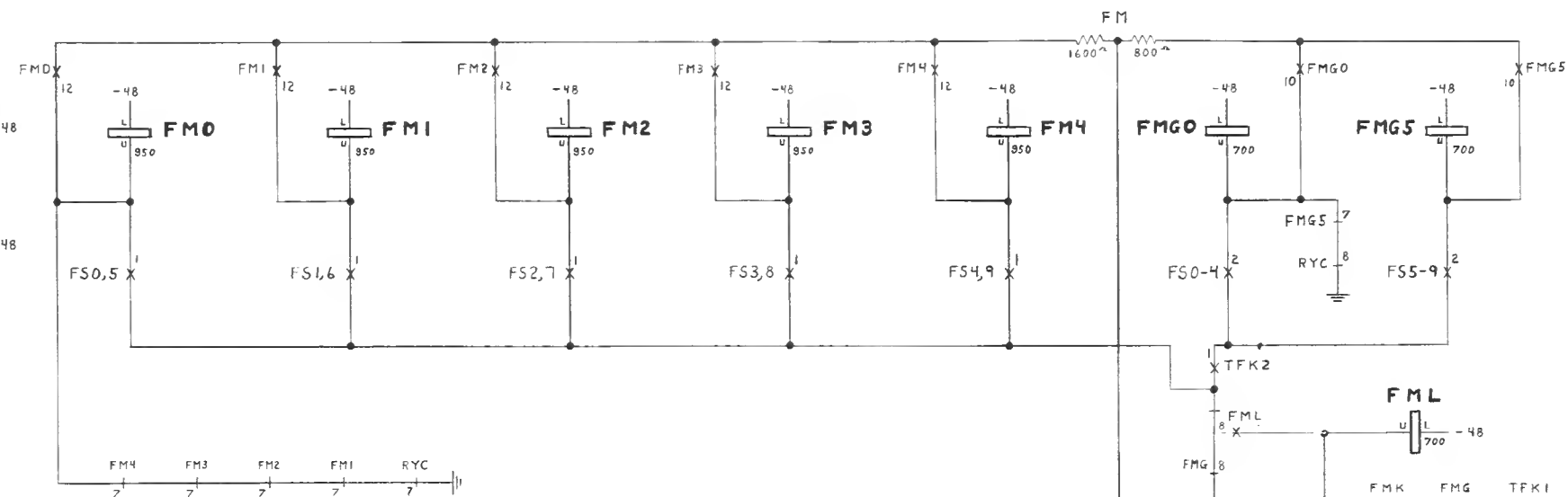
PREF. CONTROL AND MAKE BUSY CKT. SD-26039-01 ISS. 20
 ORIG. REGISTER CKT. - DIAL PULSING. SD-26040-01 ISS. 30
 TRUNK LINK CONN. CKT. SD-24033-01 ISS. 30
 TRUNK LINK CKT. SD-26032-01 ISS. 30
 MARKER CKT. SD-26001-01 ISS. 30

DIAL TONE MARKER
 10 TRUNK LINK FRAMES
 TRUNK LINK FRAME SEIZURE

OS 702-1

2 SHEETS, SHEET 1

NO 5 CROSSBAR



AMERICAN TELEPHONE & TELEGRAPH CO

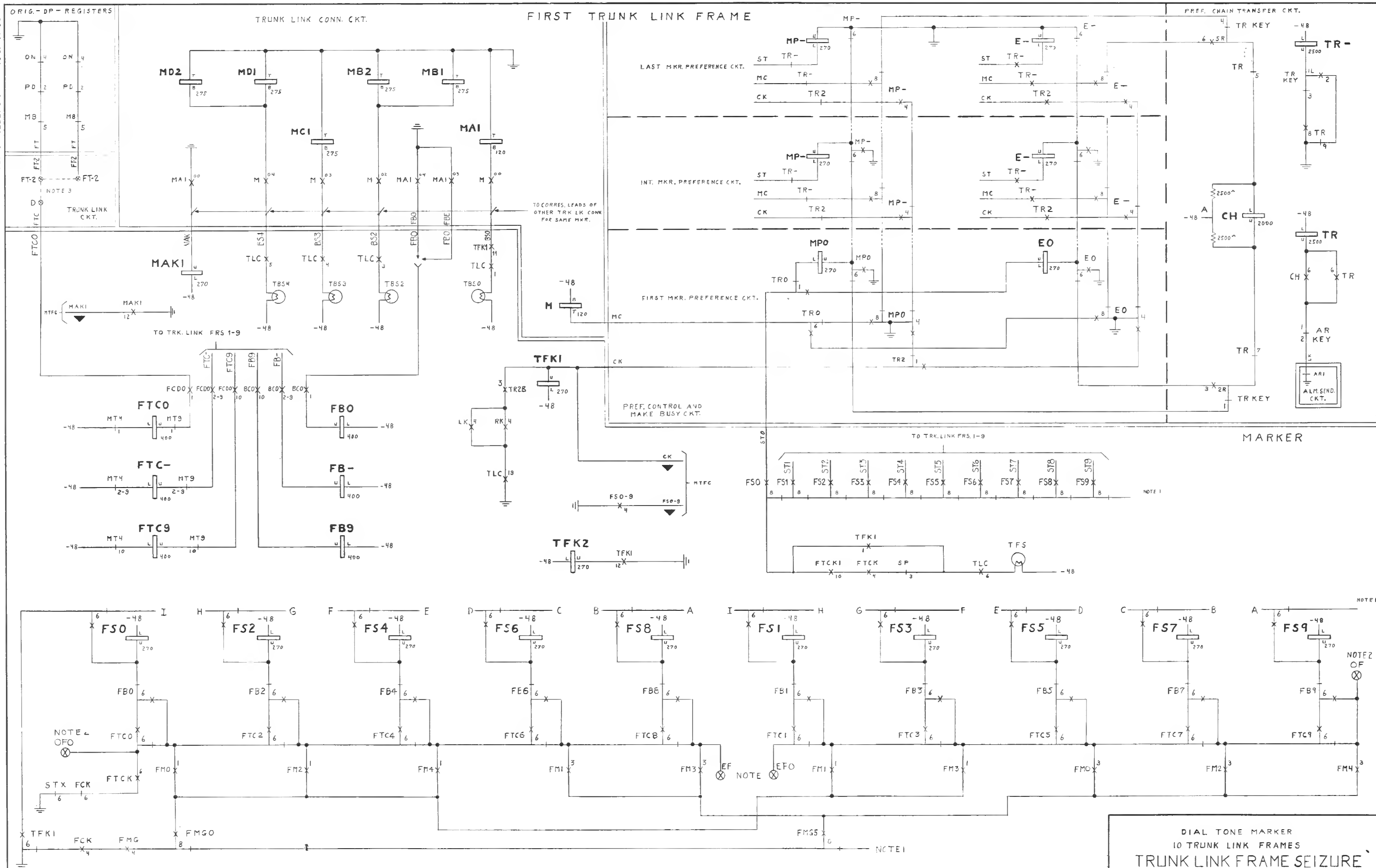
ISSUE	1	K	K	2	W	H
DATE	12	-	8	-	54	4-16-55

2 SHEETS, SHEET 1

38-Y-4301

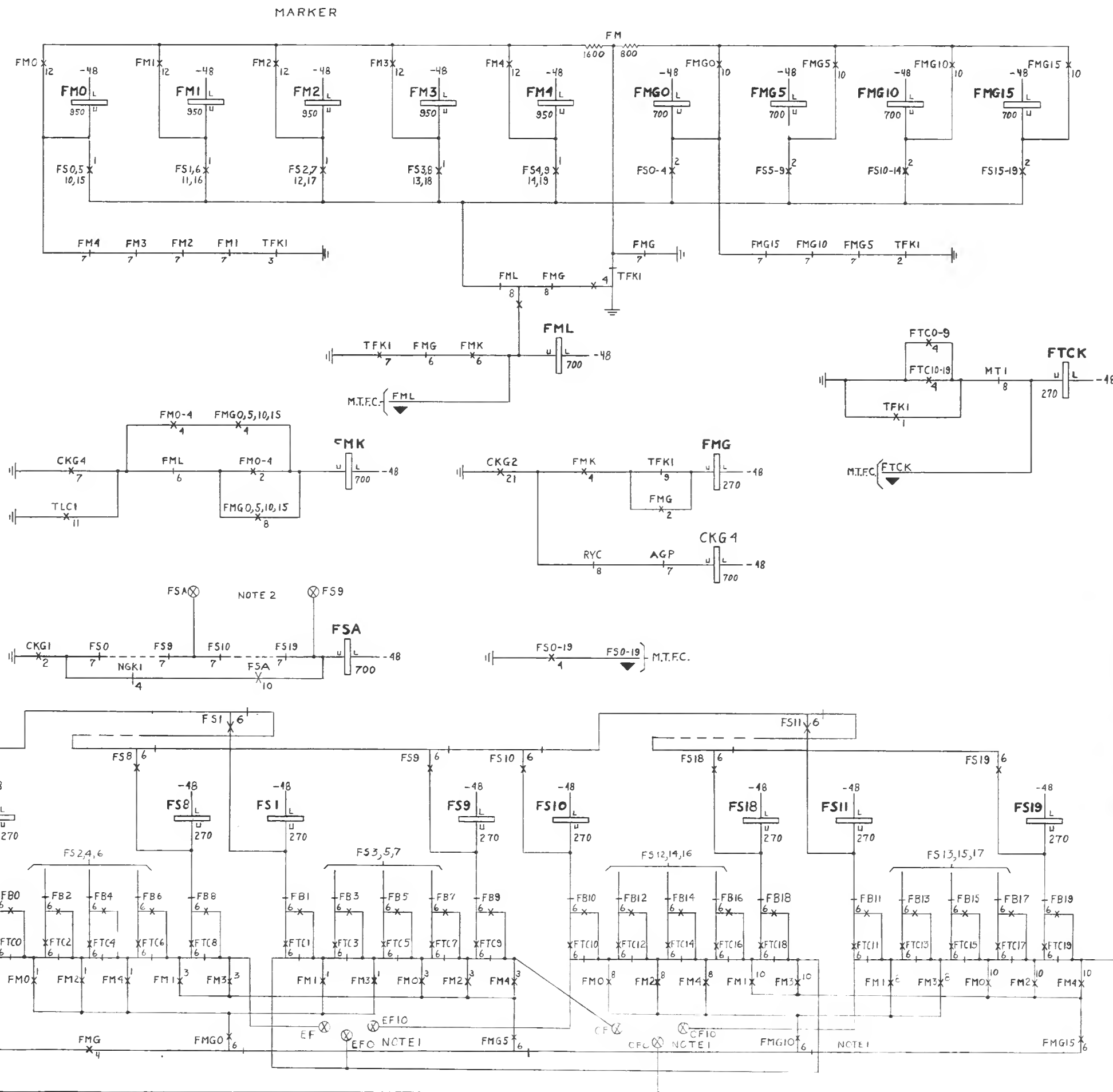
PRINTED IN U. S. A.

DATE	1	2	3	4	5
12-15-54	KK	W	H		



NOTES.

1. CROSS-CONNECT OF TO OFO AND EF TO EFO FOR TEN OR LESS TLF'S. CROSS-CONNECT OF TO OF10 AND EF TO EF10 WHEN MORE THAN TEN TLF'S.
2. CROSS-CONNECT FSA TO FS9 WHEN TEN OR LESS TLF'S



MARKER
TRUNK LINK CKT.
TRUNK LINK CONN. CKT.
OGT. TRUNK CKT.
PREF. CONTROL AND MAKE BUSY CKT.

SD 26002-01 ISS. 1
SD 26032-01 ISS. 3D
SD 26033-01 ISS. 3D
SD 26085-01 ISS. 6D
SD 26039-01 ISS. 2D

TBC

-48

COMPLETING MARKER

20 TRUNK LINK FRAMES

TRUNK LINK FRAME SEIZURE

OS 702-2

2 SHEETS, SHEET 1

NO 5 CROSSBAR

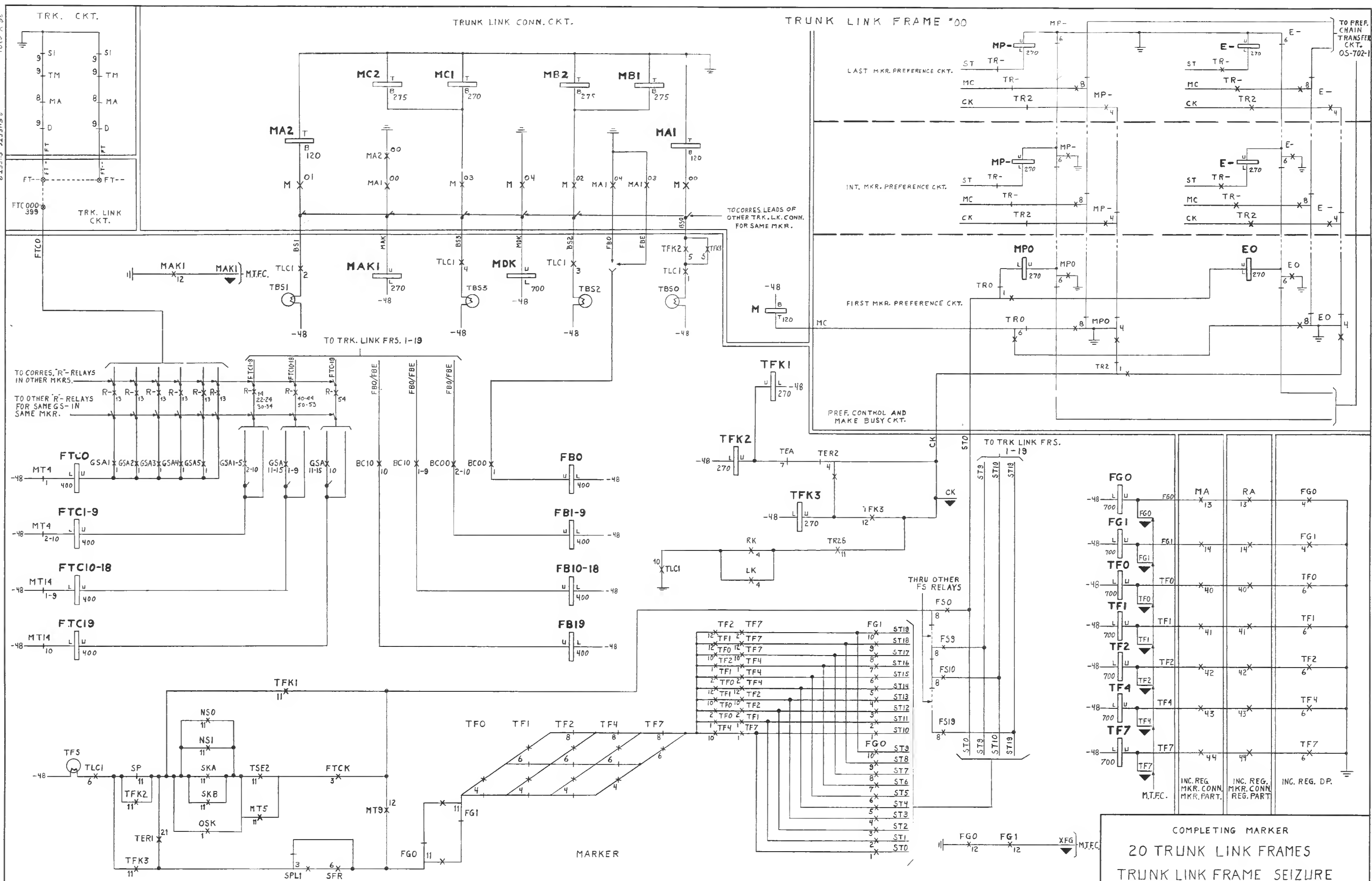
AMERICAN TELEPHONE & TELEGRAPH CO.

PRINTED IN U. S. A.

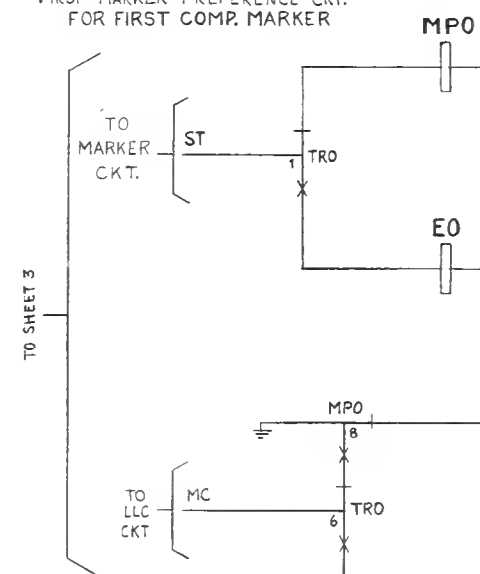
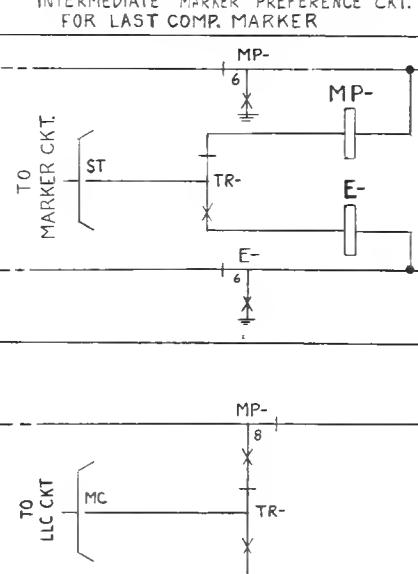
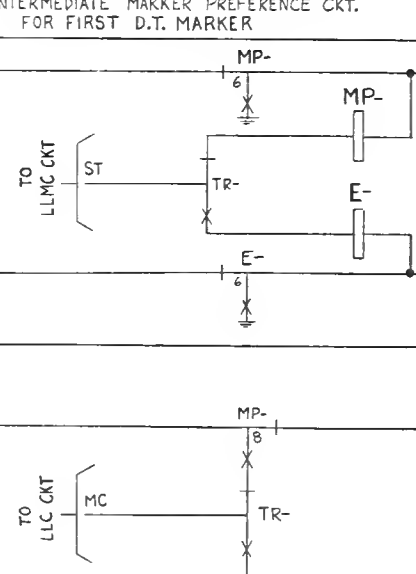
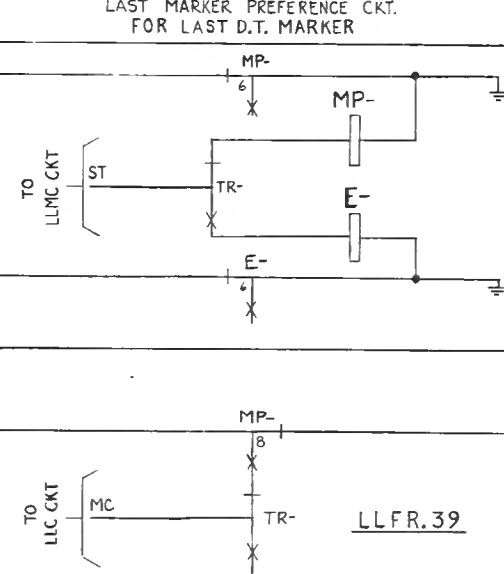
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DATE 4-16-55

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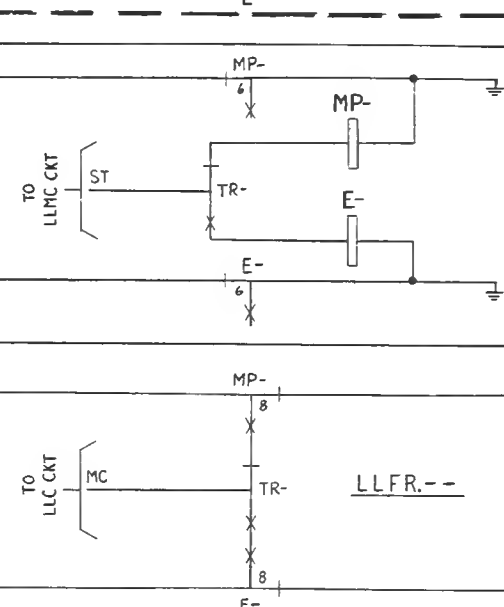
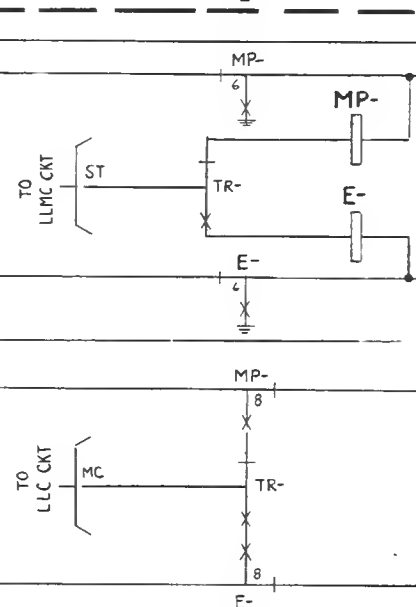
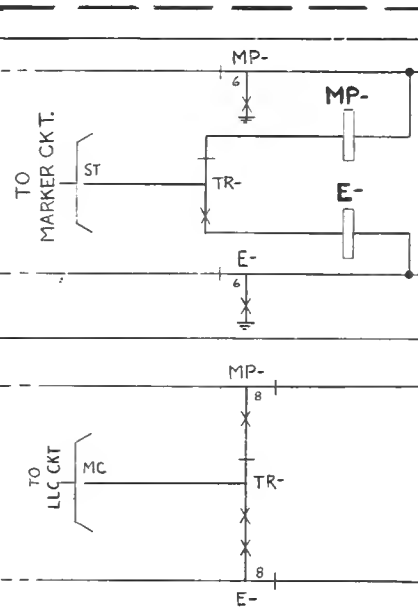
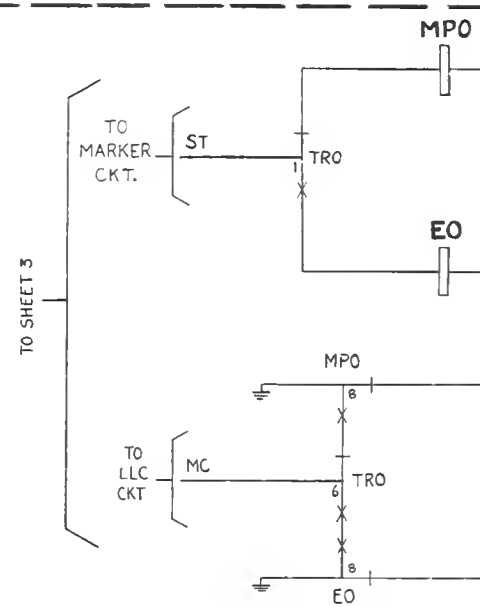
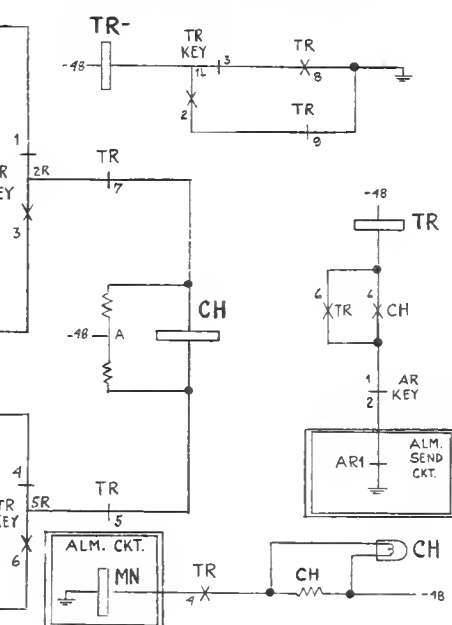
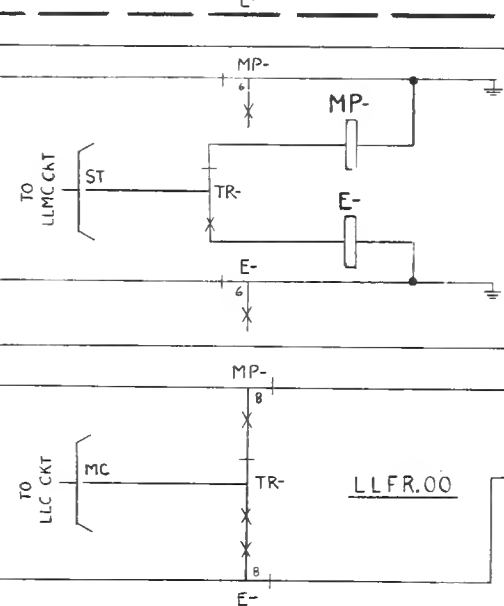
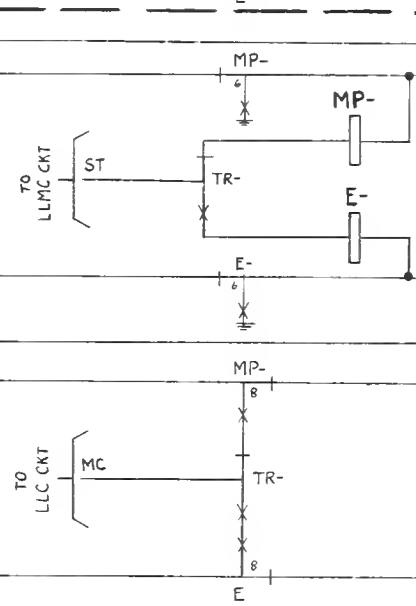
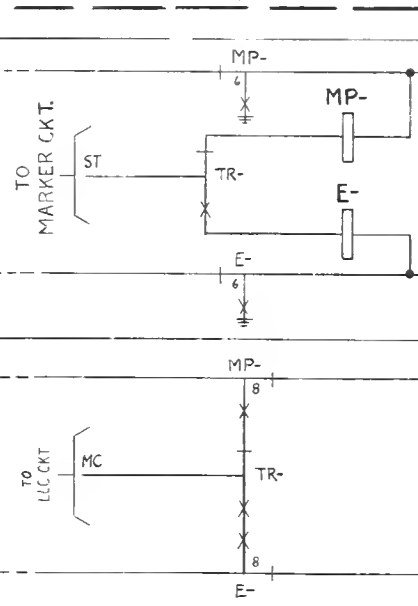
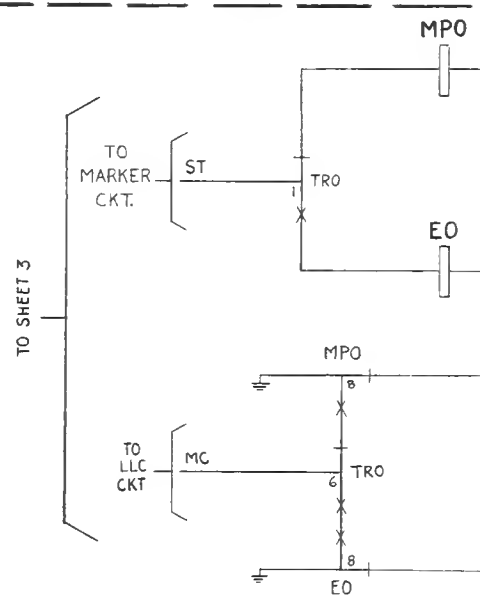
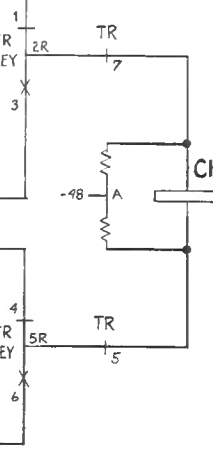
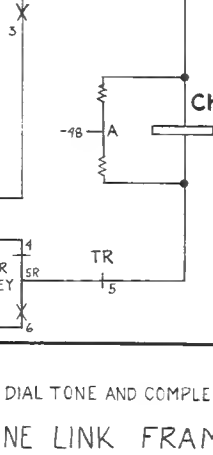
38Y4321



ISSUE	1	MB	2	WL
DATE	12-9-54	1-5-55		

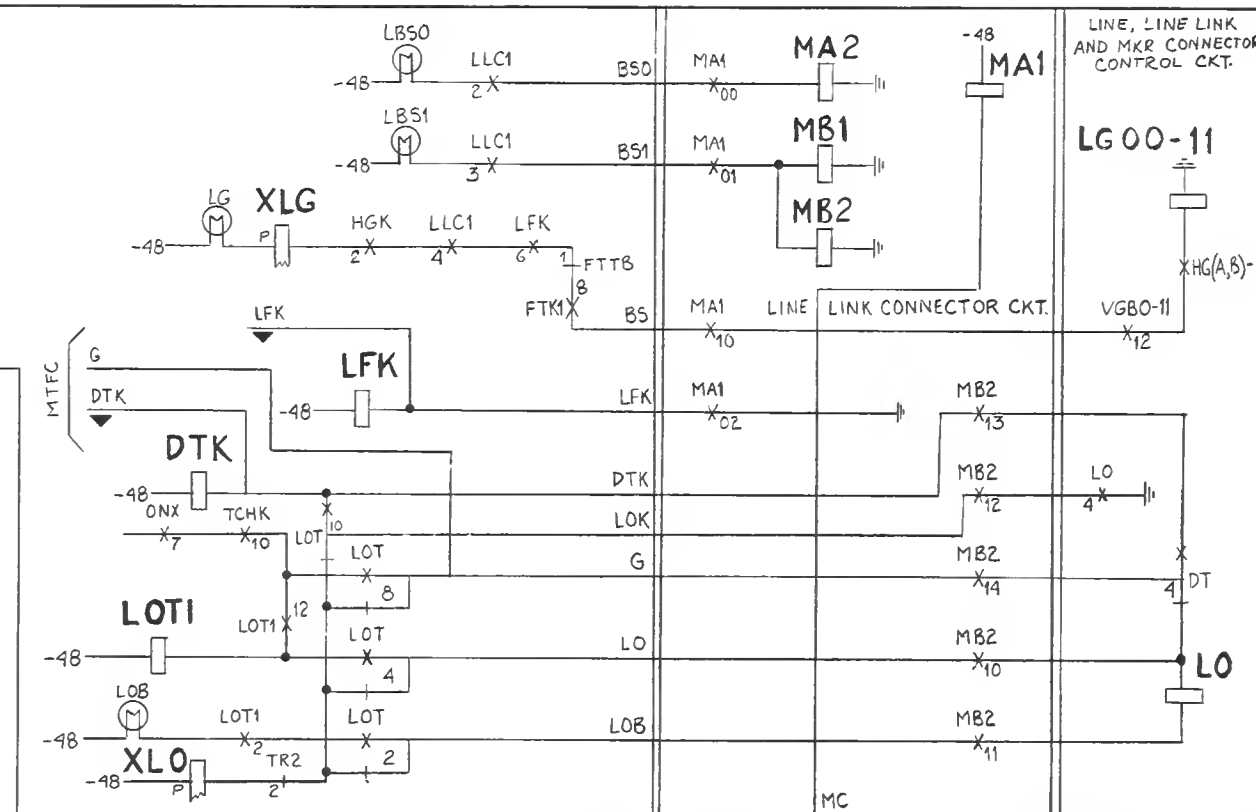
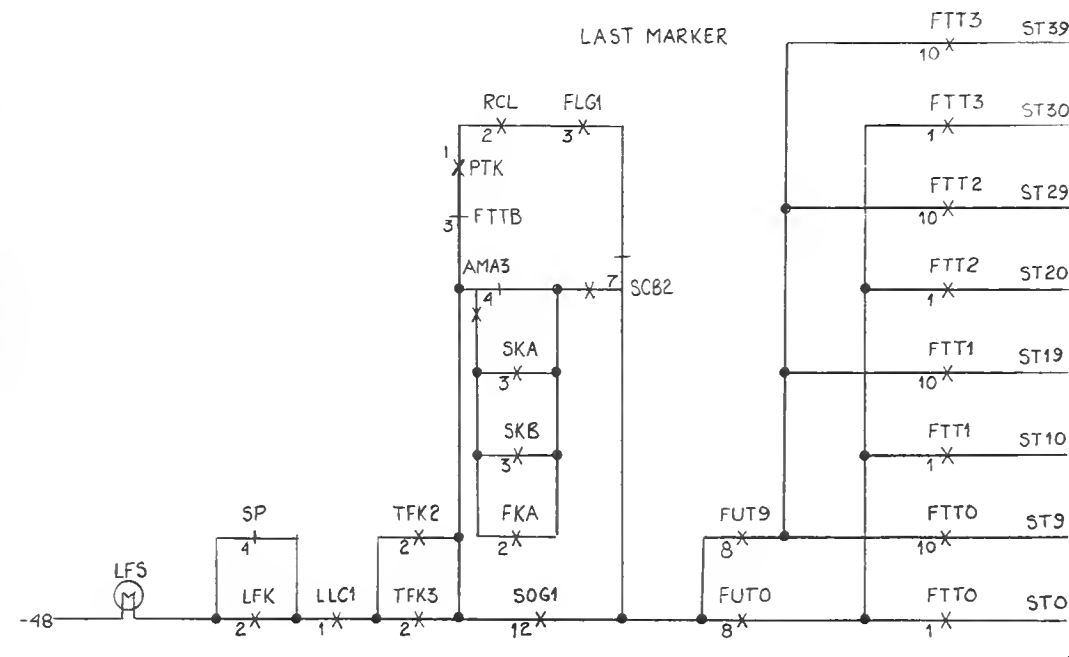
FIRST MARKER PREFERENCE CKT.
FOR FIRST COMP. MARKERINTERMEDIATE MARKER PREFERENCE CKT.
FOR LAST COMP. MARKERINTERMEDIATE MARKER PREFERENCE CKT.
FOR FIRST D.T. MARKERLAST MARKER PREFERENCE CKT.
FOR LAST D.T. MARKER

PREFERENCE CHAIN TRANSFER CKT.

TR, TR-, MN, SAME AS FOR
L.L.F.R. 39TR, TR-, MN, SAME AS FOR
L.L.F.R. 39

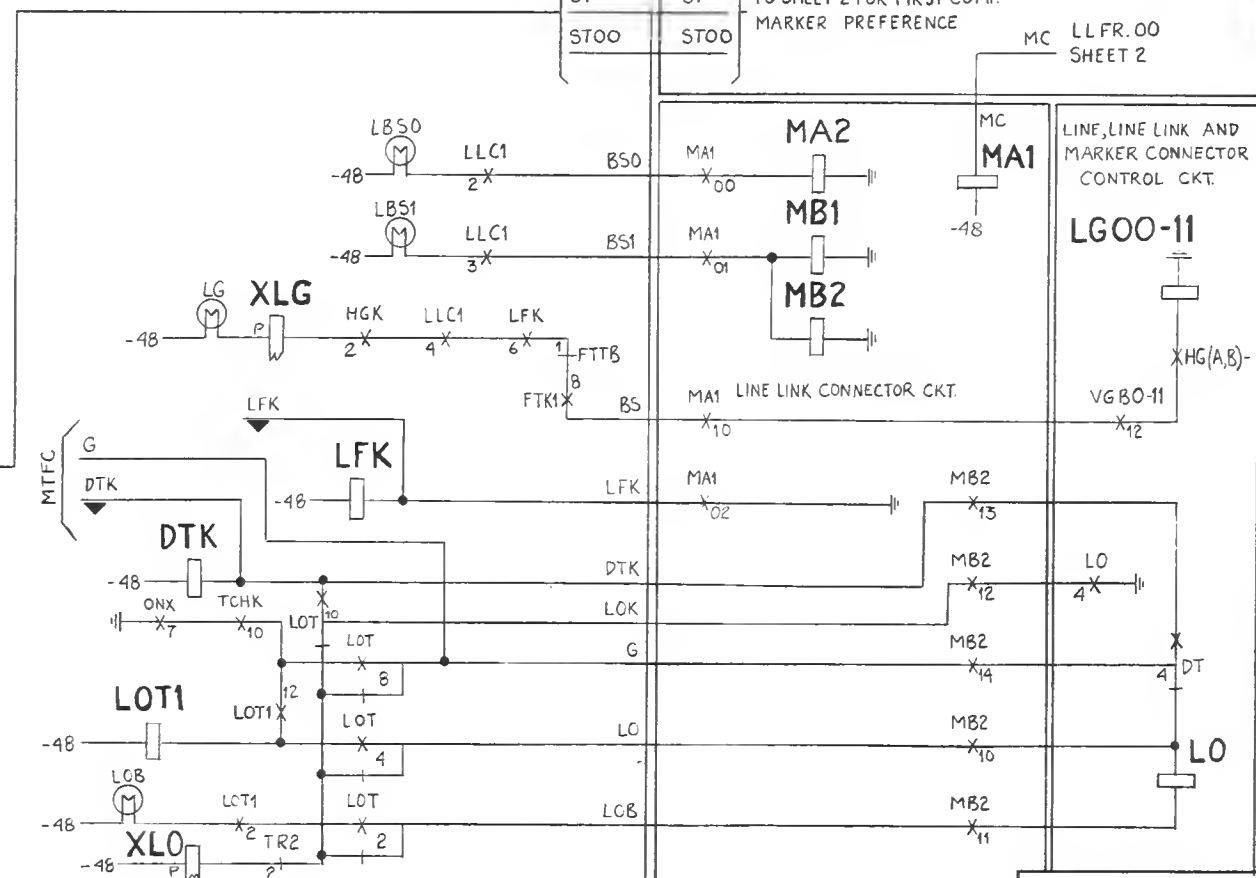
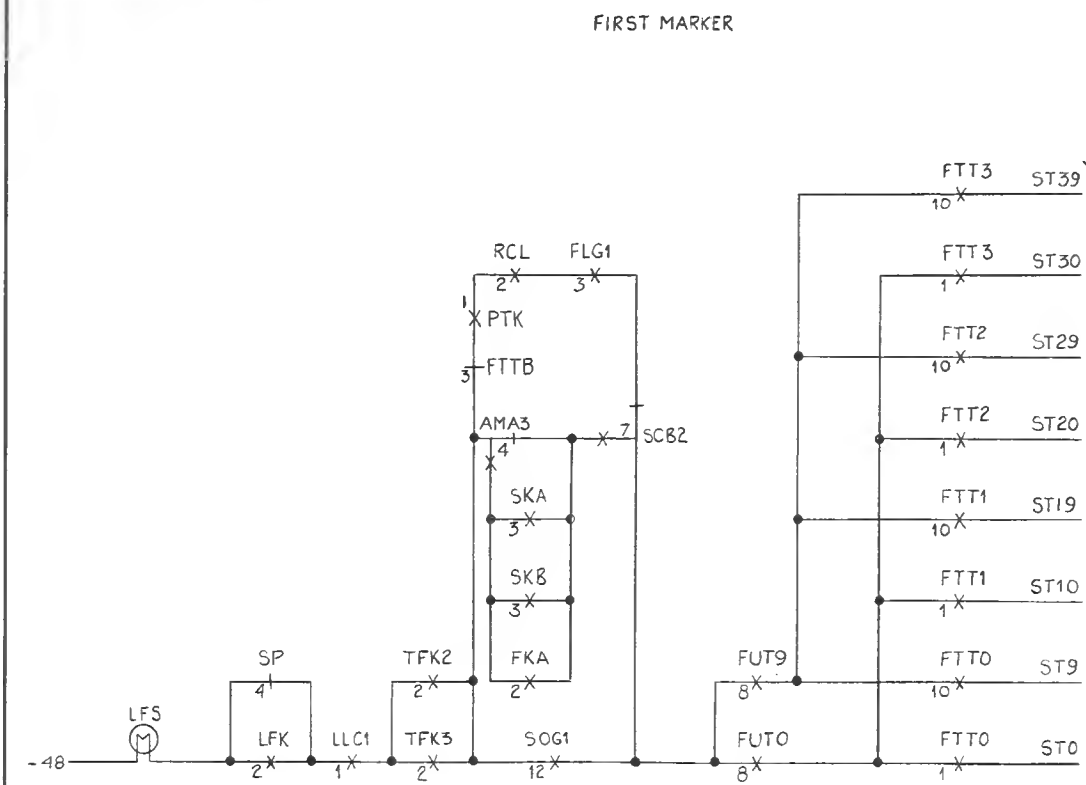
LLFR.00

ISSUE	1	W.L.	1
DATE	4-26-55		



ST39 ST39
ST-- ST-- TO SHEET 2 FOR LAST COMP.
ST00 ST00 MARKER PREFERENCE

ST39 ST39
ST-- ST-- TO SHEET 2 FOR FIRST COMP.
ST00 ST00 MARKER PREFERENCE



LINE, LINE LINK AND MARKER CONNECTOR CONTROL CKT.

LG00-11

XHG(A,B)-

VGBO-11

X12

X13

X14

X15

X16

X17

X18

X19

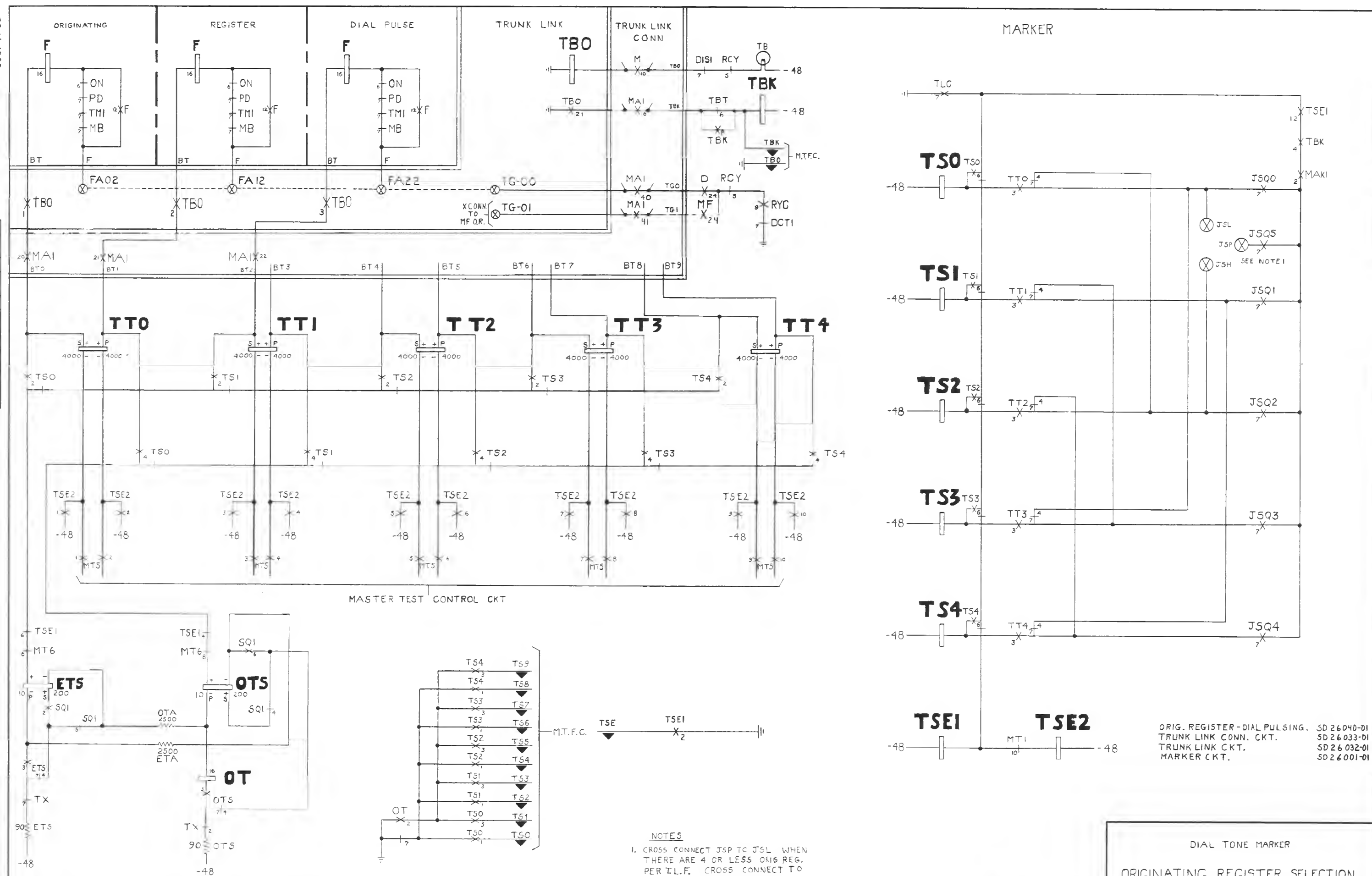
X20

X21

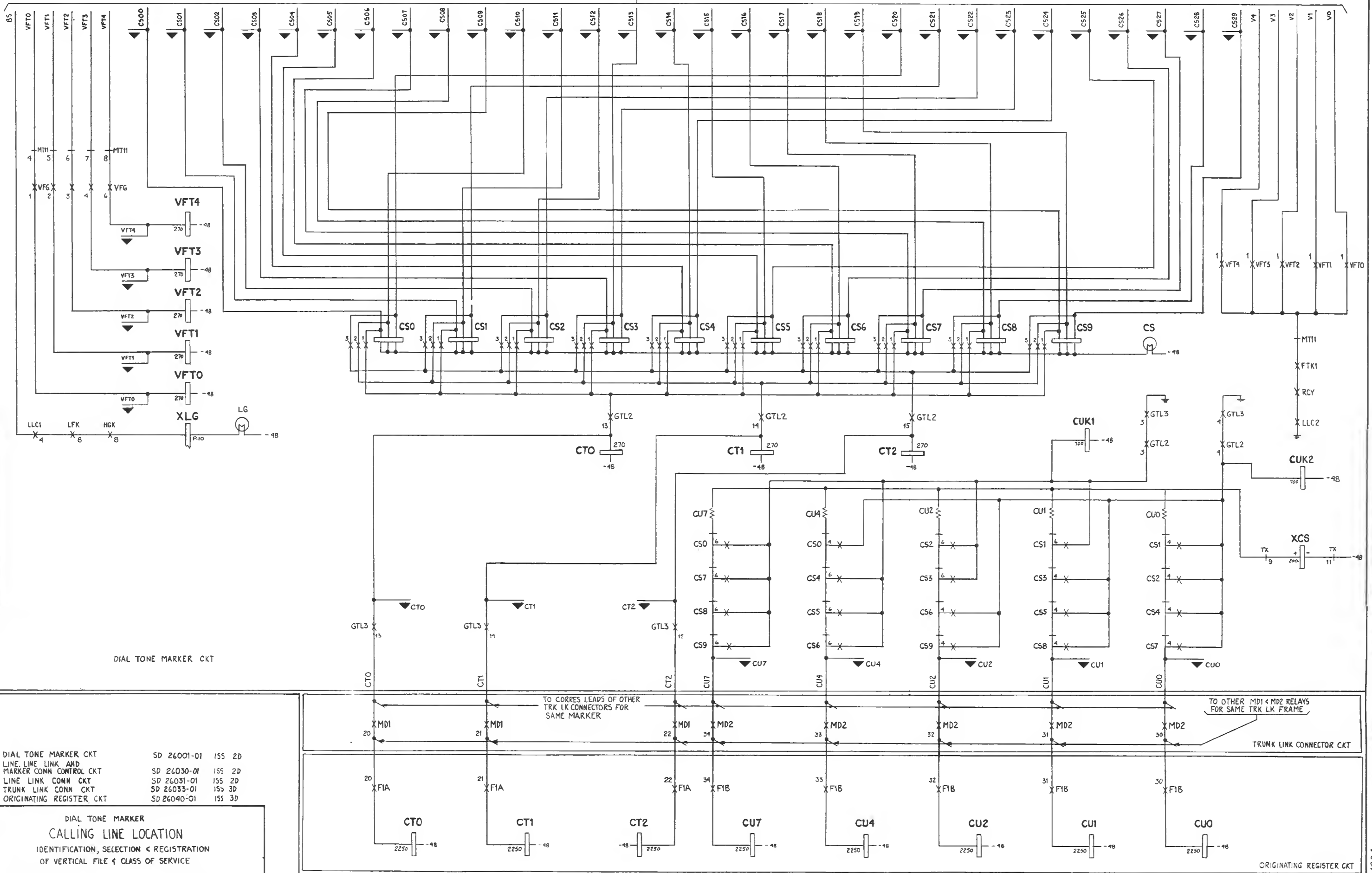
DIAL TONE MARKER CKT.
COMPLETING MARKER CKT.
LINE LINK MKR. CONN. CKT.
LINE, LINE LINK & MKR.
CONN. CONT. CKT.
LINE LINK CONNECTOR CKT.
PREF. CONTROL & MB CKT.

SD 26001-01 ISS. 3D
SD 26002-01 ISS. 1
SD 26022-01 ISS. 3D
SD 26030-01 ISS. 2D
SD 26031-01 ISS. 2D
SD 26039-01 ISS. 2D

COMPLETING MARKER
LINE LINK FRAME SEIZURE



TO SHEET 2



DIAL TONE MARKER CKT
LINE, LINE LINK AND
MARKER CONN CONTROL CKT
LINE LINK CONN CKT
TRUNK LINK CONN CKT
ORIGINATING REGISTER CKT

SD 26001-01	ISS 2D
SD 26030-01	ISS 2D
SD 26031-01	ISS 2D
SD 26033-01	ISS 3D
SD 26040-01	ISS 3D

DIAL TONE MARKER
CALLING LINE LOCATION
IDENTIFICATION, SELECTION & REGISTRATION
OF VERTICAL FILE & CLASS OF SERVICE

OS 705-1

3 SHEETS, SHEET 1

NO 5 CROSSBAR

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ISSUE 1 M.B. 2 M.B.
DATE 12-10-54 4-14-55

3 SHEETS, SHEET 1

38-Y-4304

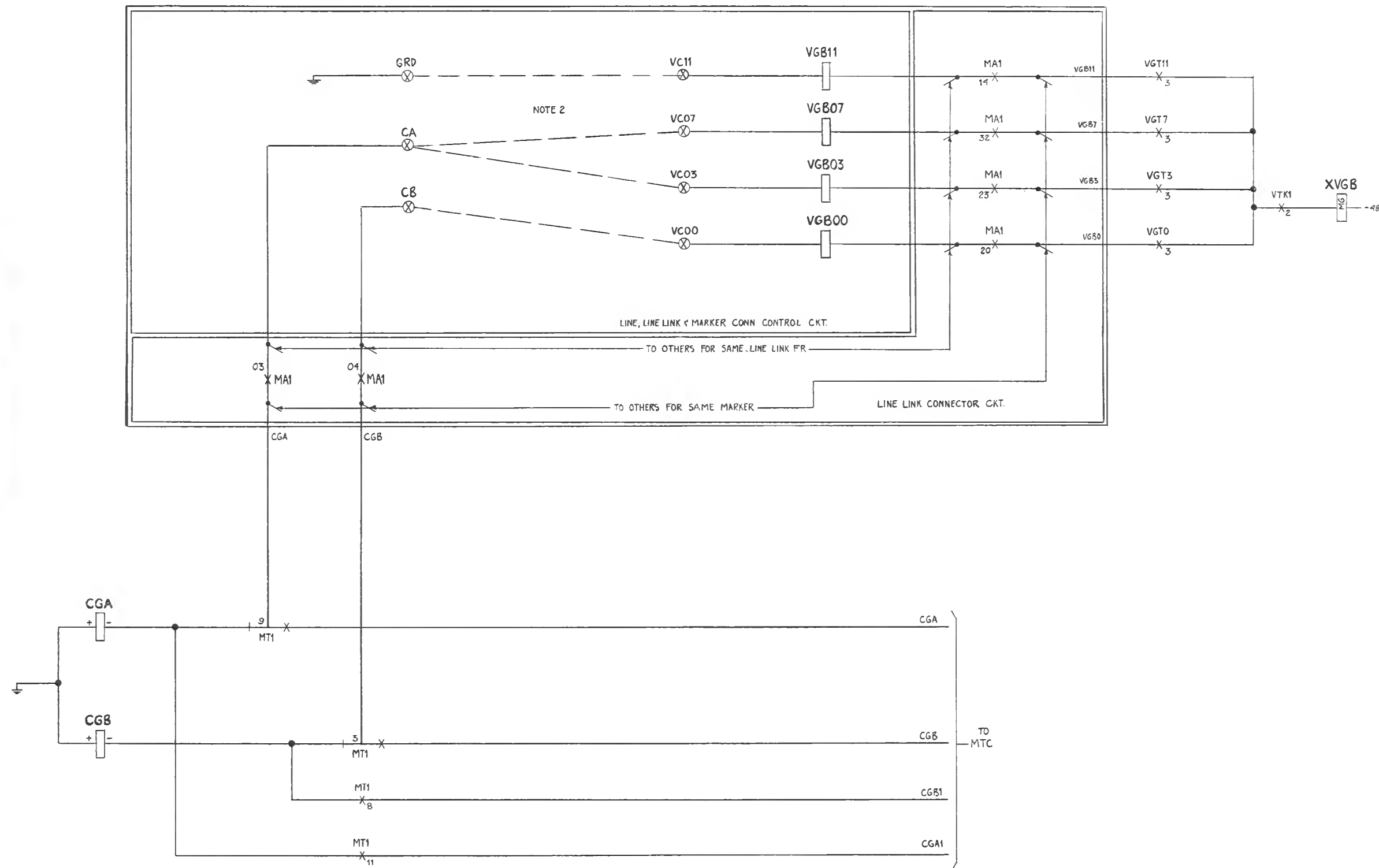
CROSS CONNECT TO "CS" PCHGS AS REQUIRED

NOTE 1

[illegible]

MULT TO OTHER RELAYS
FOR SAME MARKER

DIAL TONE MARKER
CALLING LINE LOCATION
IDENTIFICATION, SELECTION AND REGISTRATION
OF VERTICAL FILE AND CLASS OF SERVICE



MARKER

NOTE 1

THE "V" PUNCHINGS CORRESPOND TO VERTICAL FILE NUMBERS WITHIN THE VERTICAL GROUP CONSISTING OF 5 VERTICAL FILES ASSOCIATED WITH ONE (VGB-) RELAY. THE CLASS OF SERVICE FOR EACH VERTICAL FILE IS DETERMINED BY THE CROSS-CONNECTION BETWEEN THE "V" PUNCHING AND THE "CS" PUNCHING. THE CLASS OF SERVICE ASSOCIATED WITH EACH "CS" PUNCHING IS DETERMINED BY CROSS-CONNECTIONS IN THE MARKER.

NOTE 2

IF MORE THAN 30 CLASSES OF SERVICE ARE REQUIRED, CROSS-CONNECT THE "VCOO-11" PUNCHINGS TO THE "CA" OR "CB" PUNCHING. IF LESS THAN 30 CLASSES OF SERVICE ARE REQUIRED, CROSS-CONNECT THE "VCOO-11" PUNCHINGS TO THE "GRD" PUNCHING.

CALLING LINE LOCATION

IDENTIFICATION, SELECTION AND REGISTRATION
OF VERTICAL FILE AND CLASS OF SERVICE

NOTE 1- PATTERN CROSS-CONNECTIONS
CROSS CONNECT LEADS L TO P AS FOLLOWS

NON PAIRED						PAIRED					
L-	P-					L-	P-				
0	9	9	9	2	2	9	0	2	9	3	4
1	9	9	9	9	2	2	1	9	2	4	3
2	2	9	9	9	9	2	2	9	2	9	3
3	2	2	9	9	9	9	3	9	2	9	2
4	9	2	2	9	9	9	4	4	3	2	9
5	9	9	2	2	9	9	5	3	4	9	2
TLF	0	1	2	3	4	5	TL	0	1	2	3
							PAIR				

NOTE 2- RELAYS OPERATED FOR SUBGROUP CUT-IN

		JSQ0	JSQ1	JSQ2	JSQ3	JSQ4	JSQ5
2G	STP1	GO	GO	G1	GO	GO	G1
	STP2	G1	G1	GO	G1	G1	GO
3G	STP1	GO	GO	GO	GO	GO	GO
	STP2	G1	G2	G1	G2	G1	G2

NOTE 3- FOR OPERATION WITH 6 NON-PAIRED TRUNK LINK FRAMES
OR 6 PAIRS OF TRUNK LINK FRAMES, CROSS CONNECT
SZ6 TO SZD.

NOTE 4- FOR NON-PAIRED OPERATION CROSS CONNECT SF TO SPF
FOR PAIRED OPERATION CROSS CONNECT PR TO SPF

MARKER CKT SD-26001-01
TRK LINK CONN. SD-26033-01

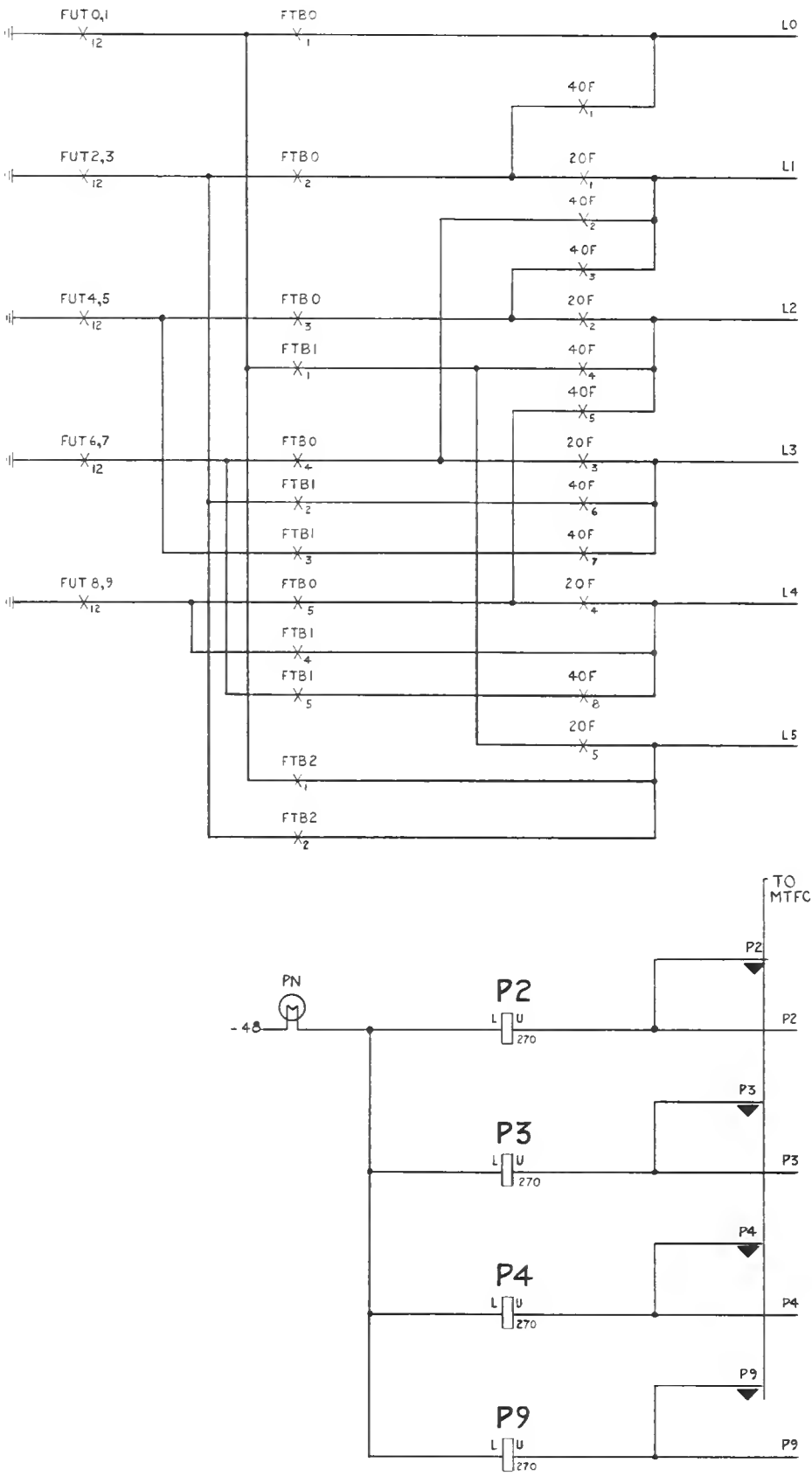
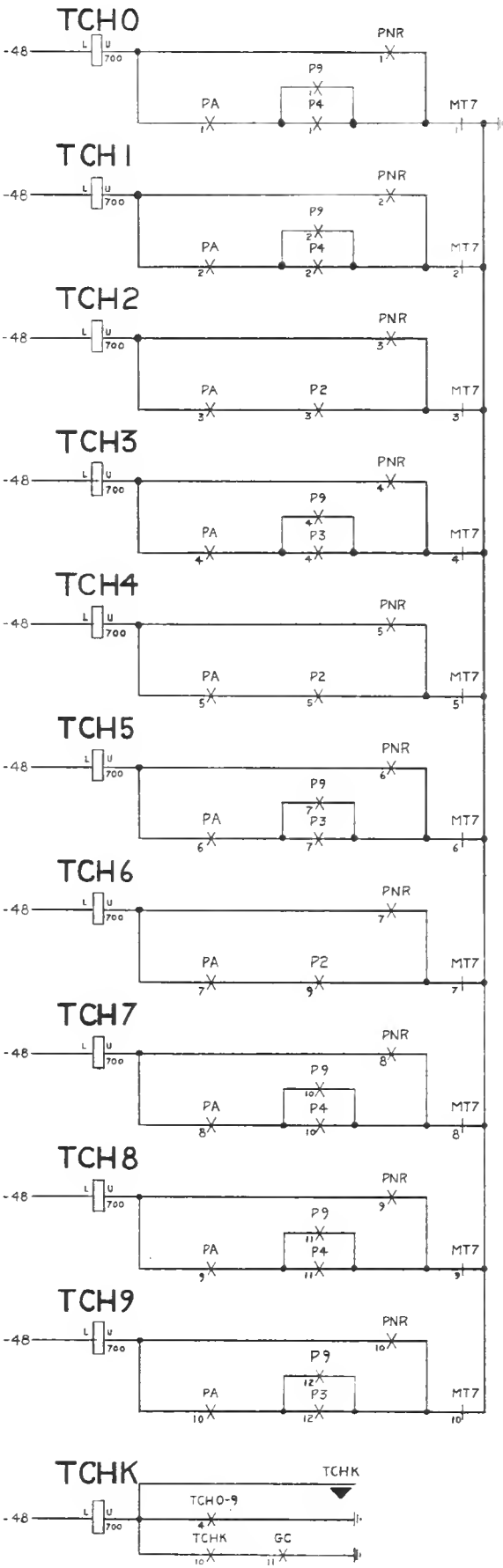
JUNCTER SUBGROUP SELECTION

6 NON-PAIRED OR 6 PAIRS OF TRK. LINK FRAMES

OS706-1

2 SHEETS, SHEET 1

NO. 5 CROSSBAR



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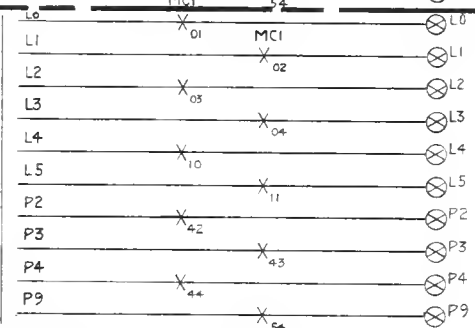
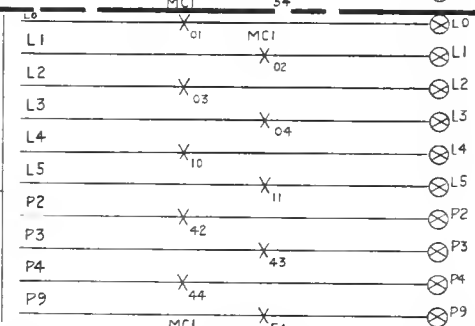
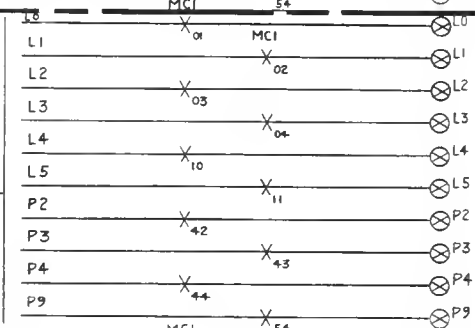
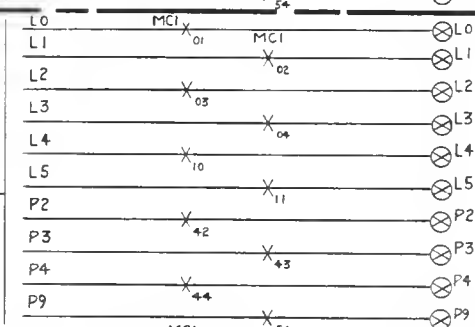
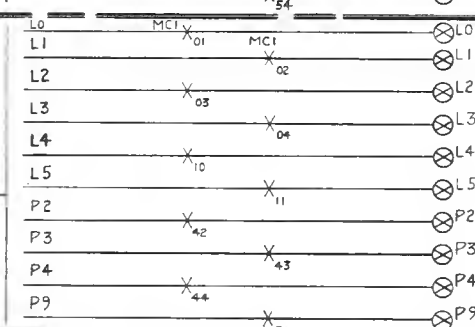
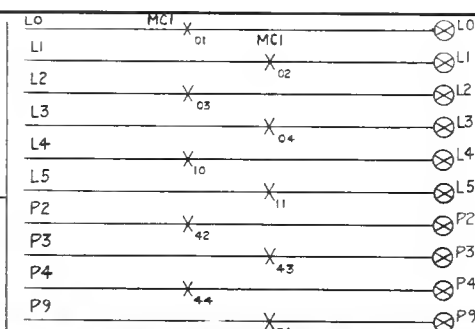
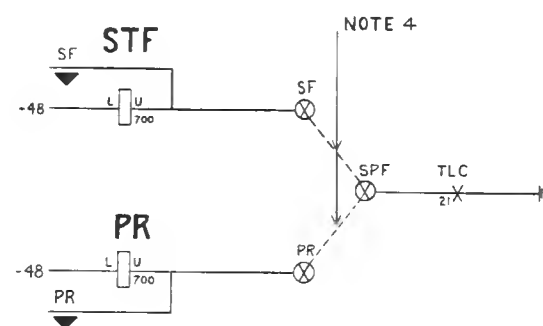
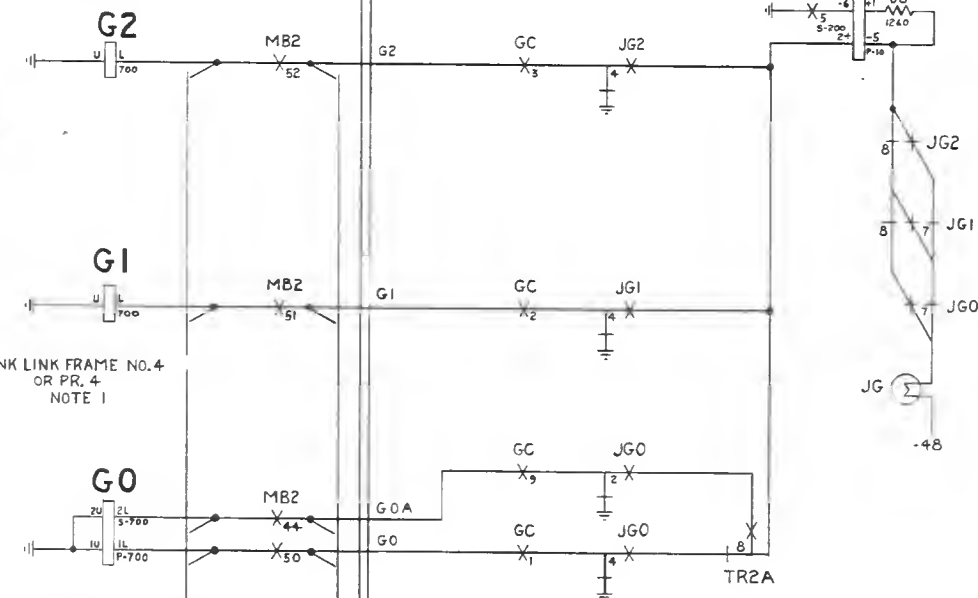
ISSUE	1	2	3	4	5	6	7	8	9	10	11	12
DATE	12-8-54											

2 SHEETS, SHEET 1

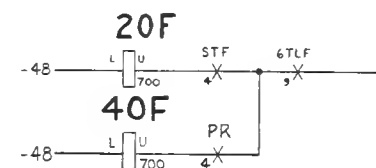
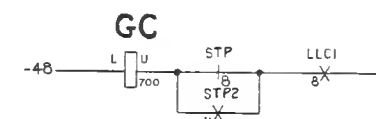
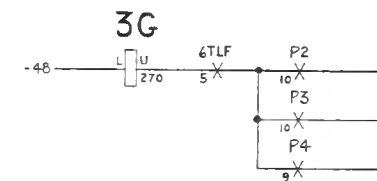
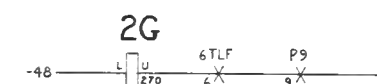
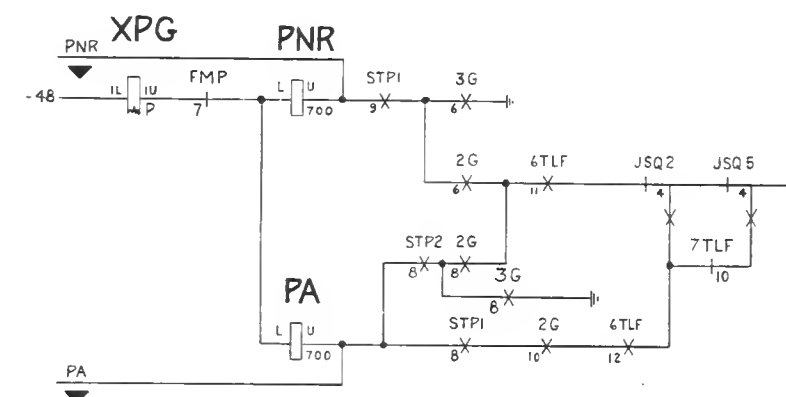
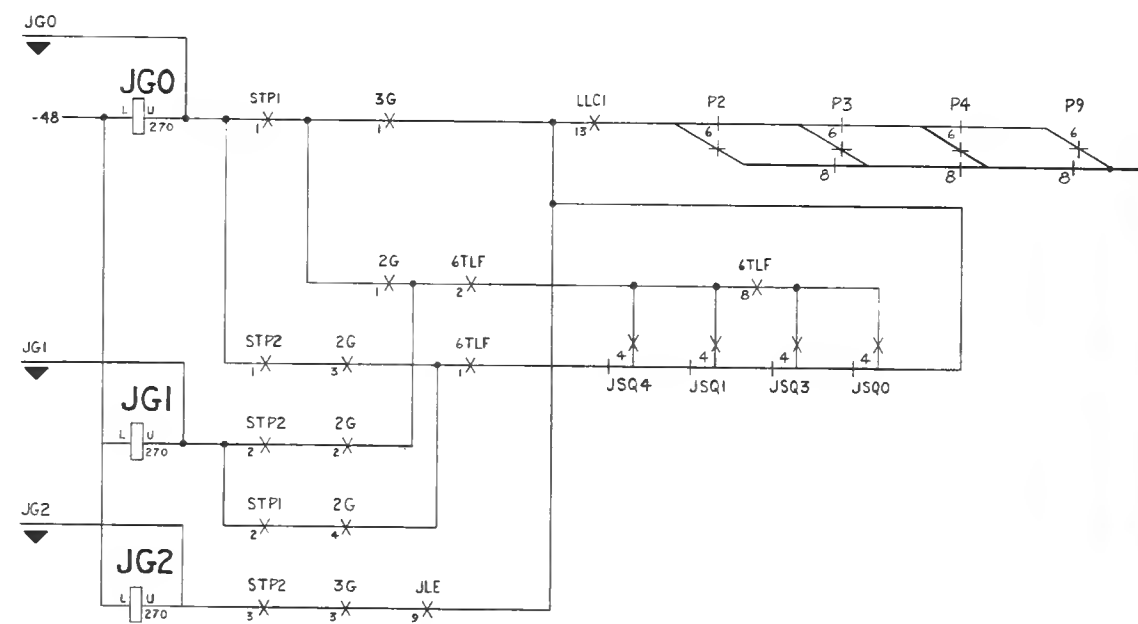
38-Y-4305

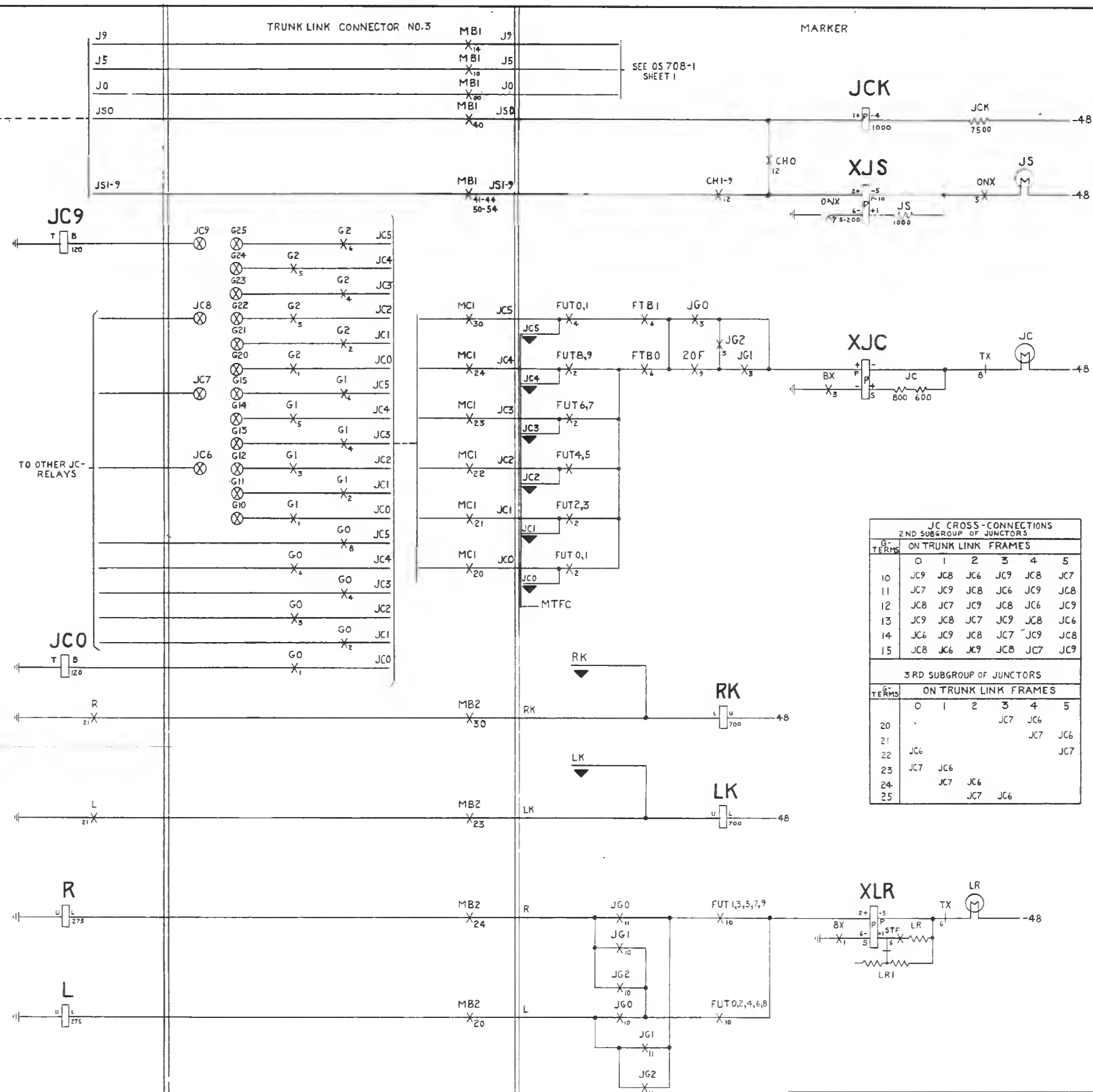
ISSUE	1	W	L
DATE	12-9-54		

TO SHEET 1

TRUNK LINK FRAME NO. 5
OR PR. 5
NOTE 1TRUNK LINK FRAME NO. 4
OR PR. 4
NOTE 1TRUNK LINK FRAME NO. 3
OR PR. 3
NOTE 1TRUNK LINK FRAME NO. 2
OR PR. 2
NOTE 1TRUNK LINK FRAME NO. 1
OR PR. 1
NOTE 1TRUNK LINK FRAME NO. 0
OR PR. 0
NOTE 1

MARKER





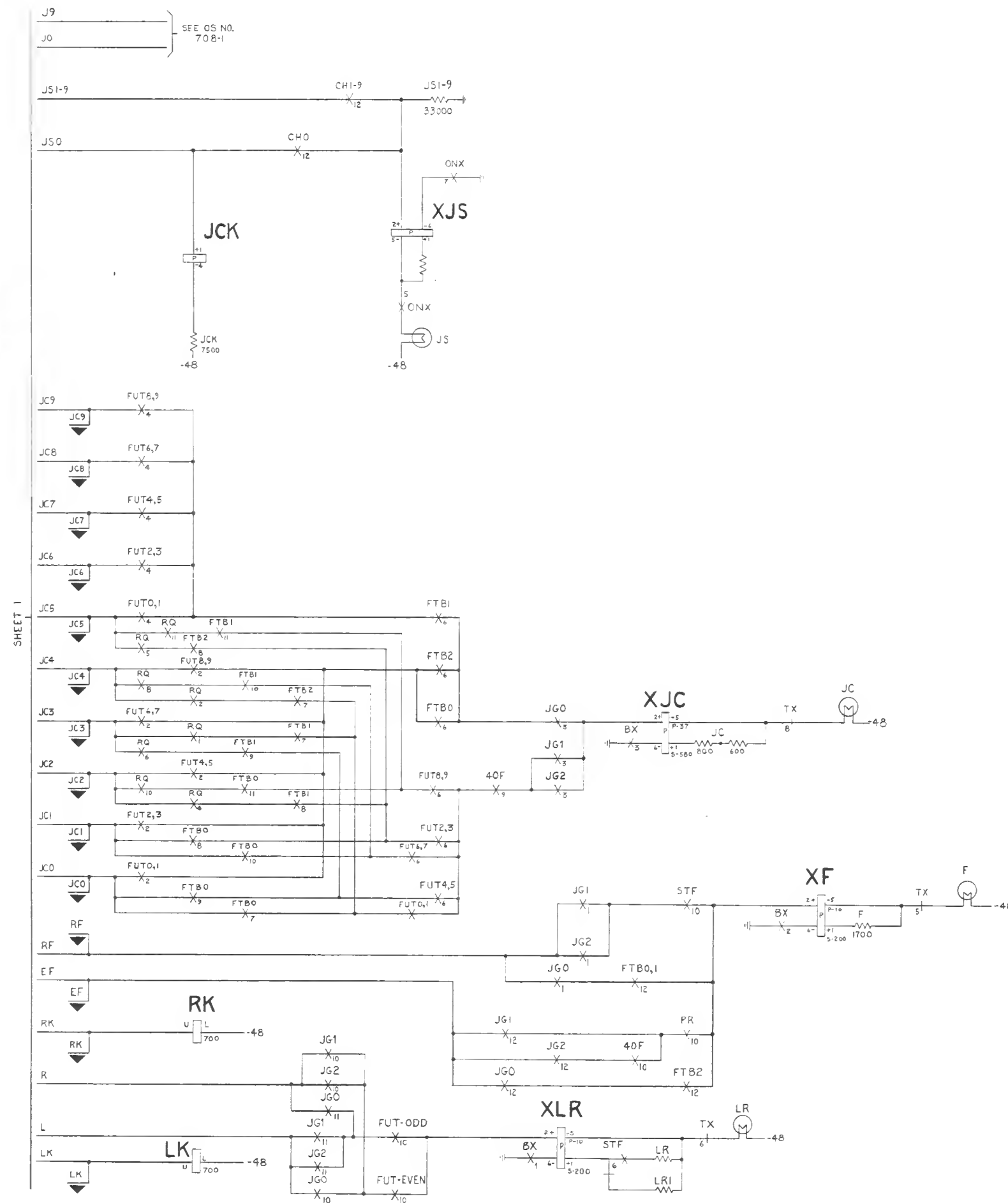
JC CROSS-CONNECTIONS						
2ND SUBGROUP OF JUNCTIONS						
G-TERMS	ON TRUNK LINK FRAMES					
	0	1	2	3	4	5
10	JC9	JC8	JC6	JC9	JC8	JC7
11	JC7	JC9	JC8	JC6	JC9	JC8
12	JC8	JC7	JC9	JC8	JC6	JC7
13	JC9	JC8	JC7	JC9	JC8	JC7
14	JC6	JC9	JC8	JC7	JC9	JC8
15	JC8	JC6	JC9	JC8	JC9	JC7
3RD SUBGROUP OF JUNCTIONS						
G-TERMS	ON TRUNK LINK FRAMES					
	0	1	2	3	4	5
20				JC7	JC6	
21					JC7	
22	JC6					JC7
23	JC7	JC6				
24		JC7	JC6			
25			JC7	JC6		

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6 NON PAIRED TRUNK LINK FRAMES

N0.5 CROSSBAR

OS 707-1



NOTE 1. ARRANGEMENTS SHOWN ARE FOR
(1) TLF NO.7

A. IF OFFICE IS INITIALLY EQUIPPED FOR PAIRED FRAME OPERATION

B. CONVERTED FROM SINGLE TO PAIRED OPERATION AND NONE OF THE FORMER SINGLE TRK. LINK FRAMES ARE PAIRED WITH EACH OTHER.

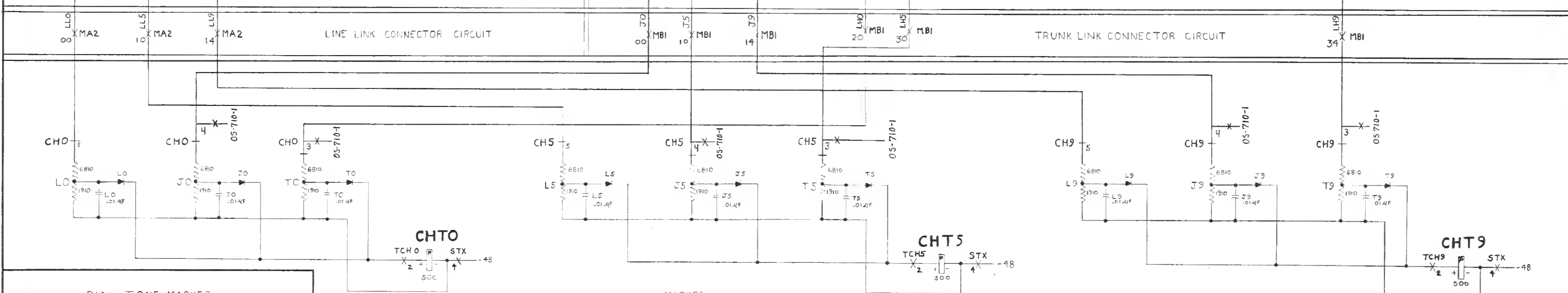
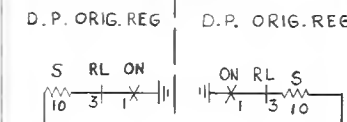
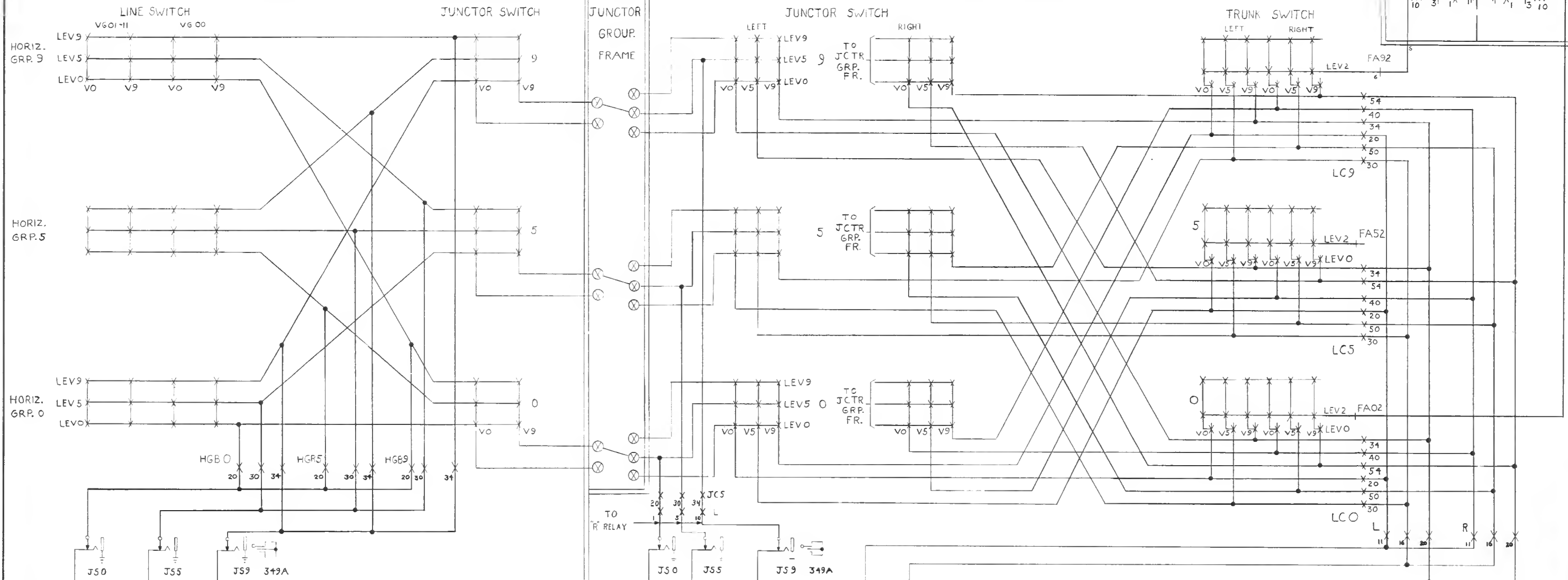
NOTE 2. JC-CROSS-CONNECTIONS

2ND SUBGROUP OF JUNCTORS							
G TERM	ON TRK. LINK PAIR						
	0	1	2	3	4	5	
10	JC7	JC7	JC9	JC9	JC5	JC5	
11	JC6	JC6	JC8	JC8	JC4	JC4	
12	JC5	JC5	JC7	JC7	JC9	JC9	
13	JC4	JC4	JC6	JC6	JC8	JC8	
14	JC9	JC9	JC5	JC5	JC7	JC7	
15	JC8	JC8	JC4	JC4	JC6	JC6	

3 RD SUBGROUP OF JUNCTORS							
G TERM	ON TRK. LINK PAIR						
	0	1	2	3	4	5	
20	JC3	JC3	JC3	JC3	JC9	JC9	
21	JC2	JC2	JC2	JC2	JC8	JC8	
22	JC9	JC9	JC3	JC3	JC3	JC3	
23	JC8	JC8	JC2	JC2	JC2	JC2	
24	JC3	JC3	JC9	JC9	JC3	JC3	
25	JC2	JC2	JC8	JC8	JC2	JC2	

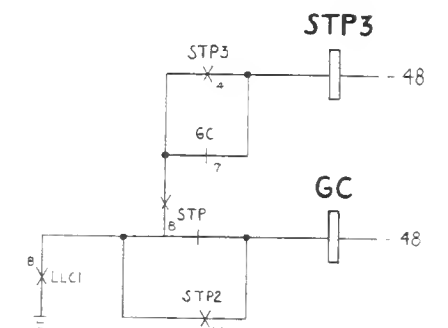
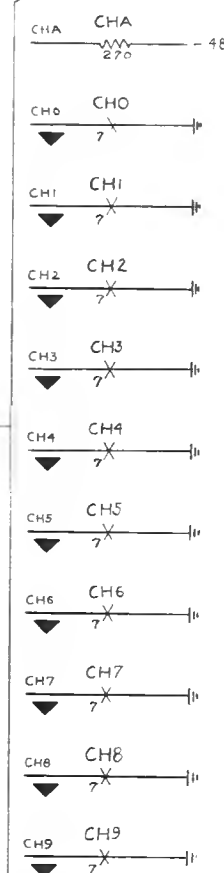
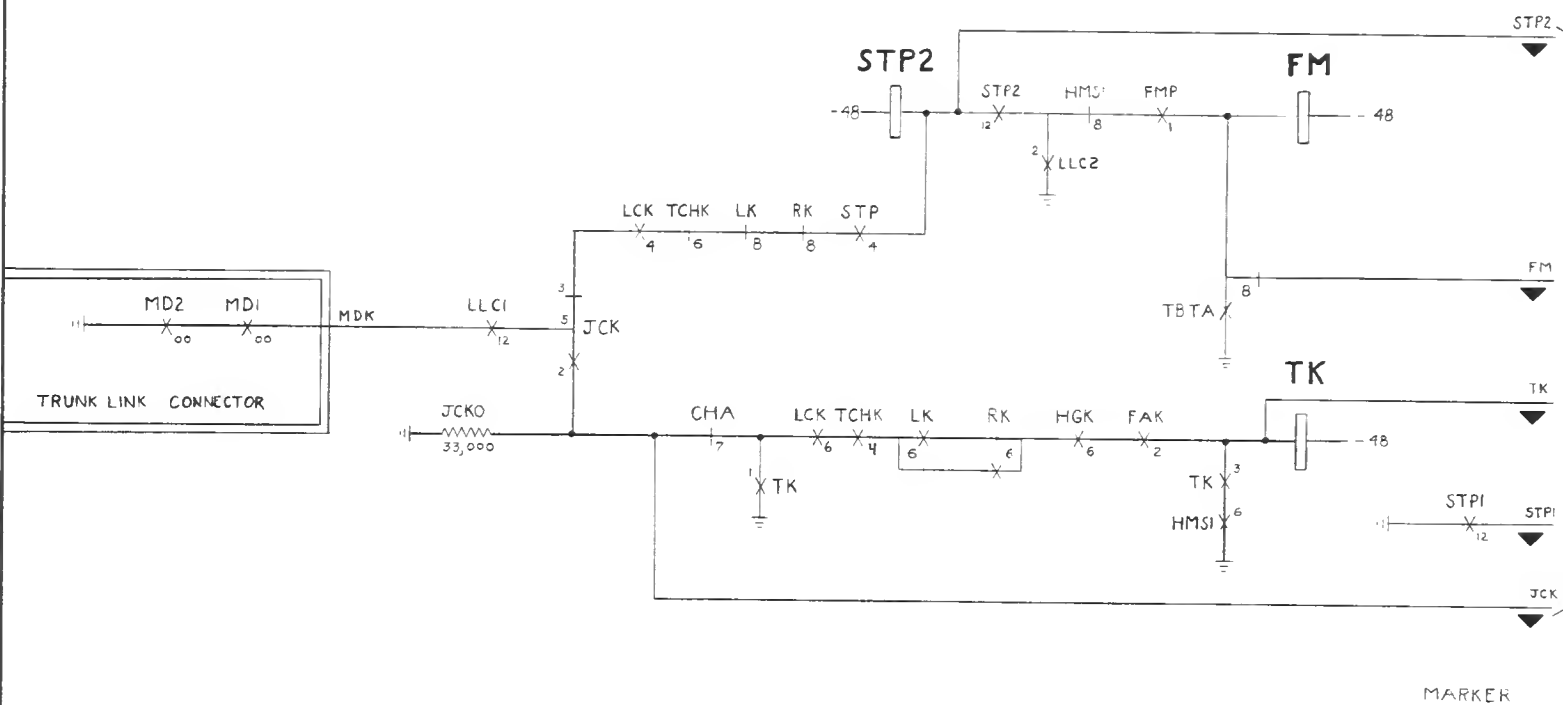
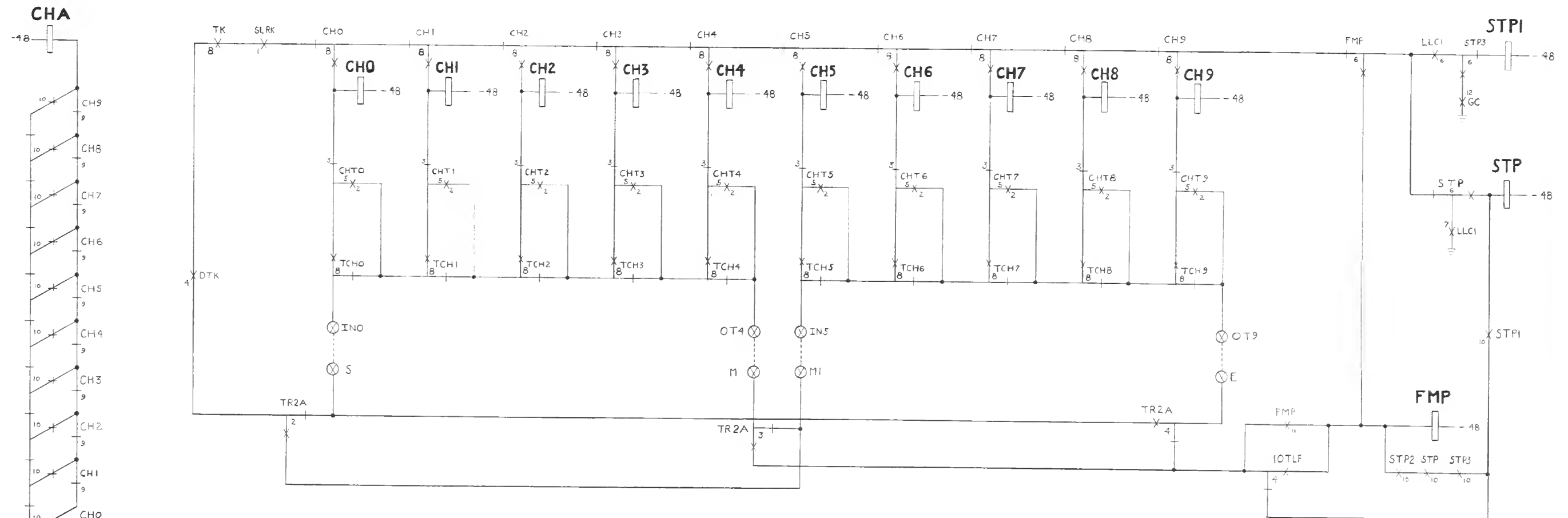
LINE LINK FRAME 10

TRUNK LINK FRAME 9



DIAL TONE MARKER
CHANNEL TEST AND SELECTION
FAILURE TO MATCH
OS-708-1

DATE	ISSUE	W/H
12-10-54	1	



LINE, LINE LINK AND MARKER CONN. CONTROL CKT. SD26030-01
 LINE LINK CONN. CKT. SD26031-01
 TRUNK LINK CONN. CKT. SD26032-01
 TRUNK LINK CONN. CKT. SD26033-01
 ORIG. REGISTER CKT.-DIAL PULSING. SD26040-01
 MARKER CKT. SD26001-01



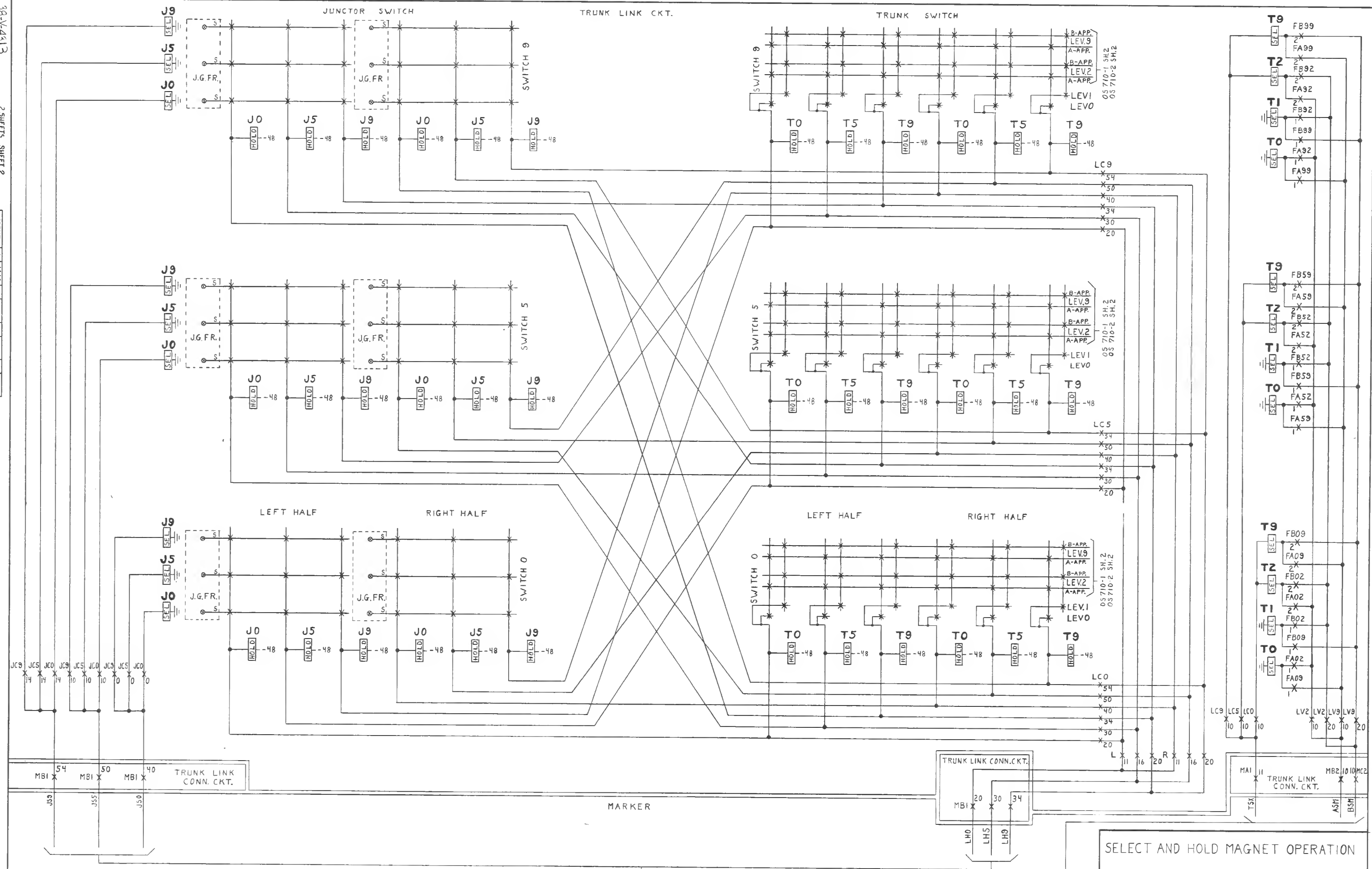
OS 710-1 SHEET 2

2 SHEETS, SHEET 1

38-Y-4313

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ISSUE	1	K	K
DATE	12-15-54		

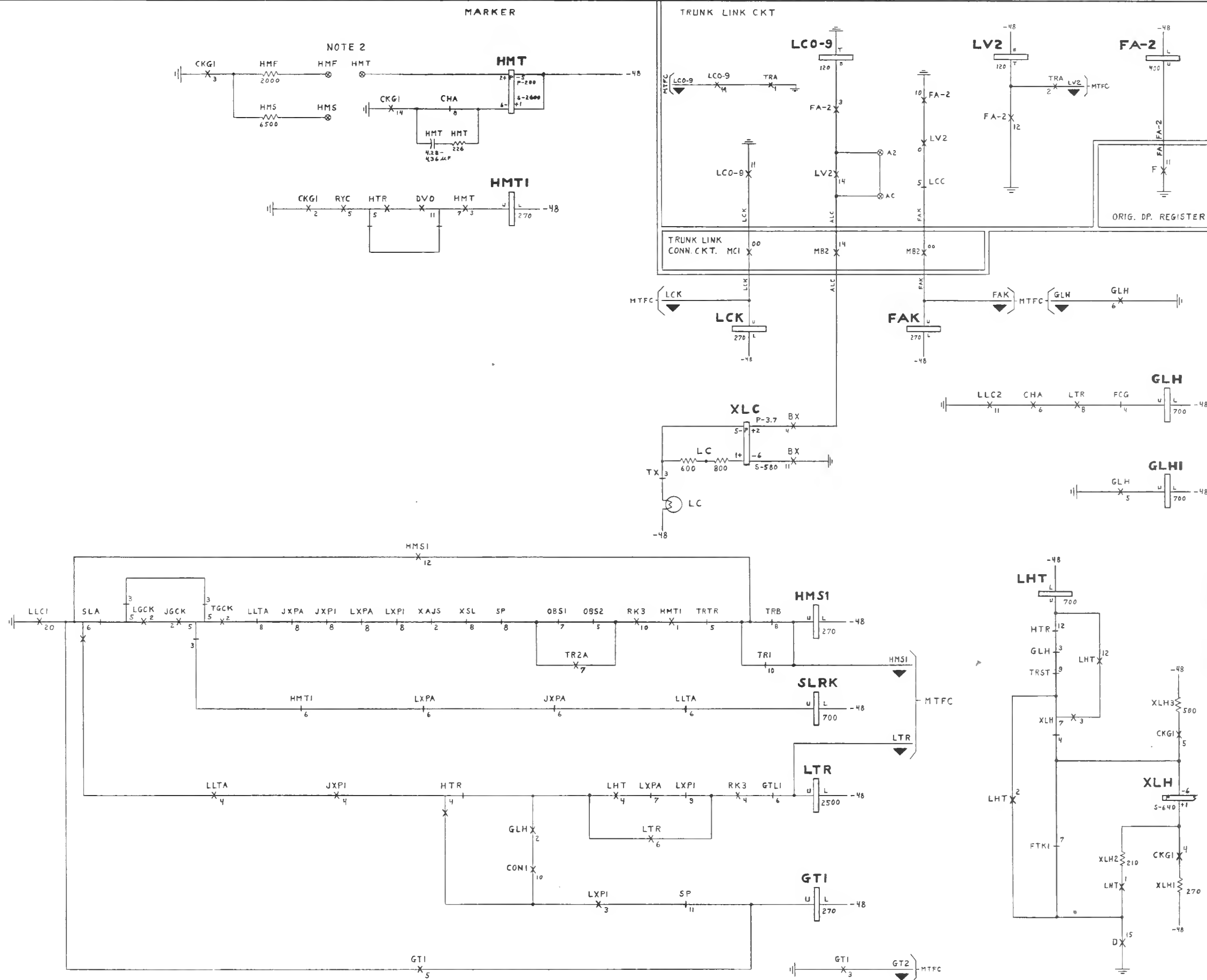


SELECT AND HOLD MAGNET OPERATION

NOTES.

1. ONLY ONE L J-SELECT MAGNET IS OPERATED WHEN THE HORIZONTAL LEVEL IS THE SAME FOR BOTH LINE AND JUNCTOR.
SEE OS 709-1 SHEET 1

2. XCONN. "HMT" TO "HMF" IF ALL LLF+TLF. SWITCHES ARE PROVIDED WITH SELECT FINGER DAMPING CONES, OTHERWISE XCONN. "HMT" TO "HMS".



TRUNK LINK CKT. SD-26032-01 ISS. 3D
TRUNK LINK CONN. CKT. SD-26033-01 ISS. 3D
LINE LINK CONN. CKT. SD-26031-01 ISS. 2D
LINE, LINE LINK AND MARKER CONN. CONTROL CKT. SD-26030-01 ISS. 2D
ORIG. REGISTER- DIAL PULSING. SD-26040-01 ISS. 3D
MARKER CKT. SD-26001-01 ISS. 2D

DIAL TONE MARKER
SELECT AND HOLD MAGNET OPERATION
AND DOUBLE CONNECTION TEST
OS 710-1

2 SHEETS, SHEET 1

NO 5 CROSSBAR

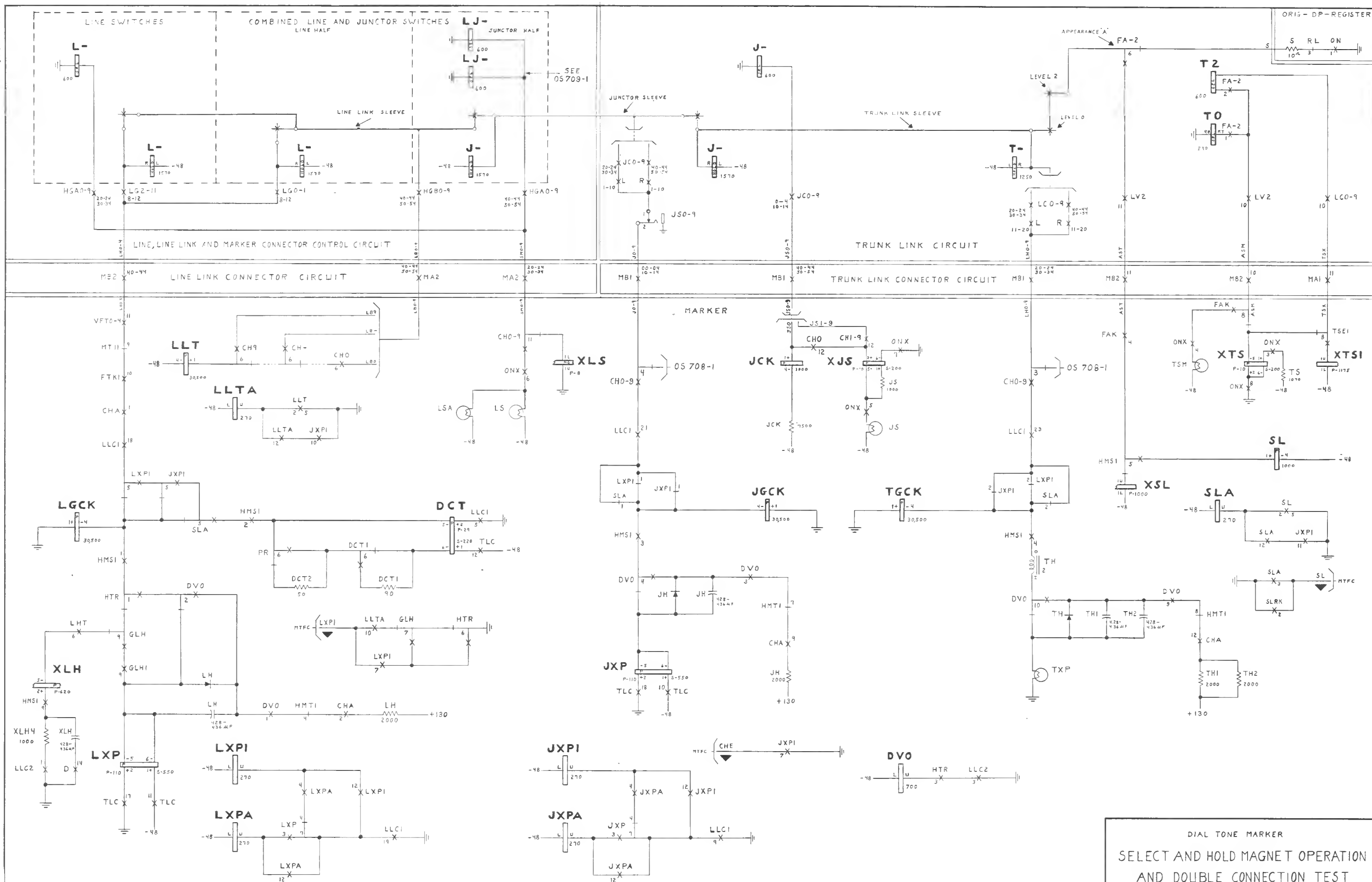
AMERICAN TELEPHONE & TELEGRAPH CO.

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ISSUE 1 K K
DATE 12-15-54

4 SHEETS, SHEET 3

38-Y-4308



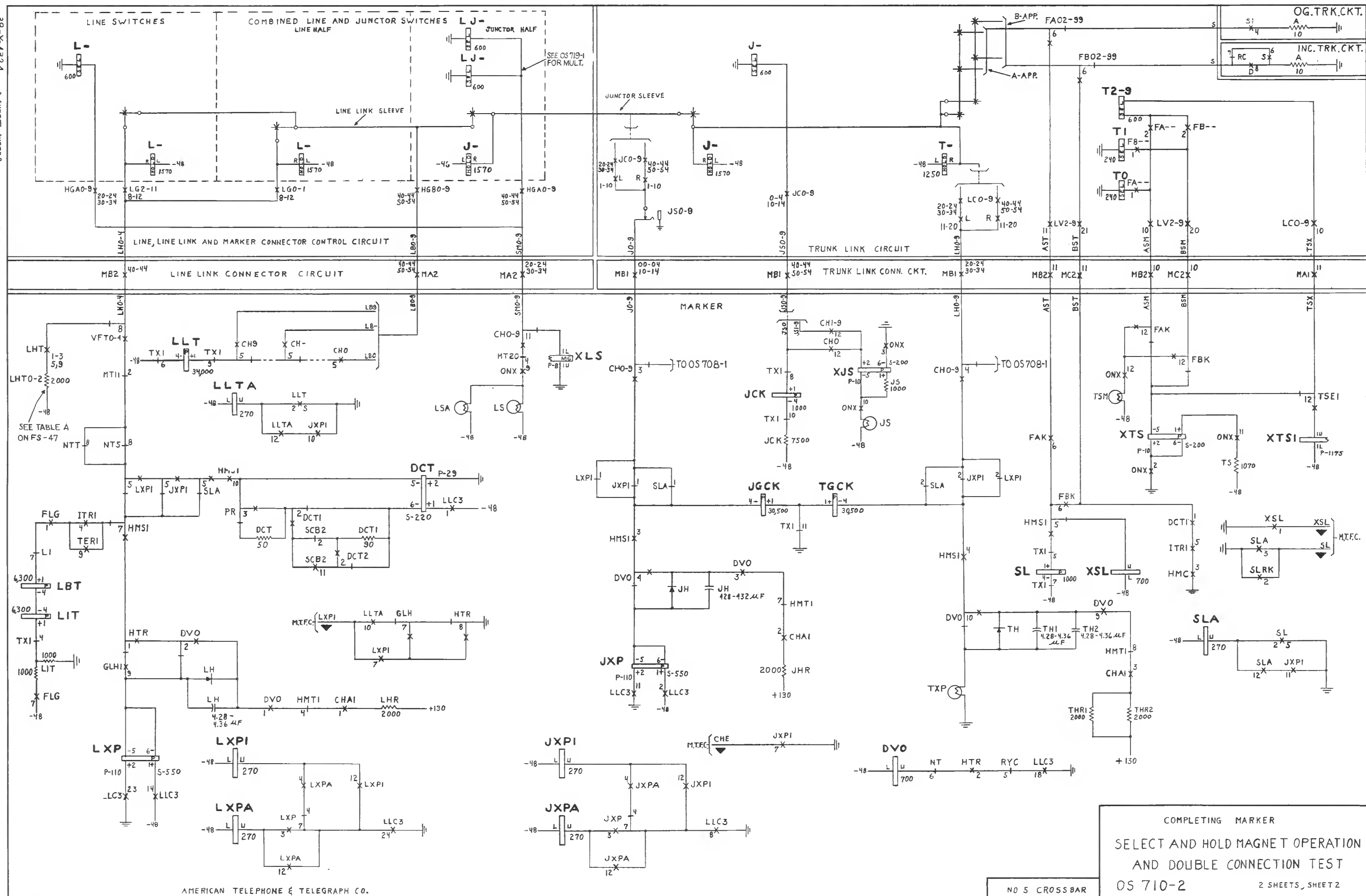
1. XCONN. "HMT" TO "HMF" WHEN ALL LLF AND TLF XBAR SWITCHES ARE PROVIDED WITH SELECT FINGER DAMPING CONES; OTHERWISE XCONN. "HMT" TO "HMS".

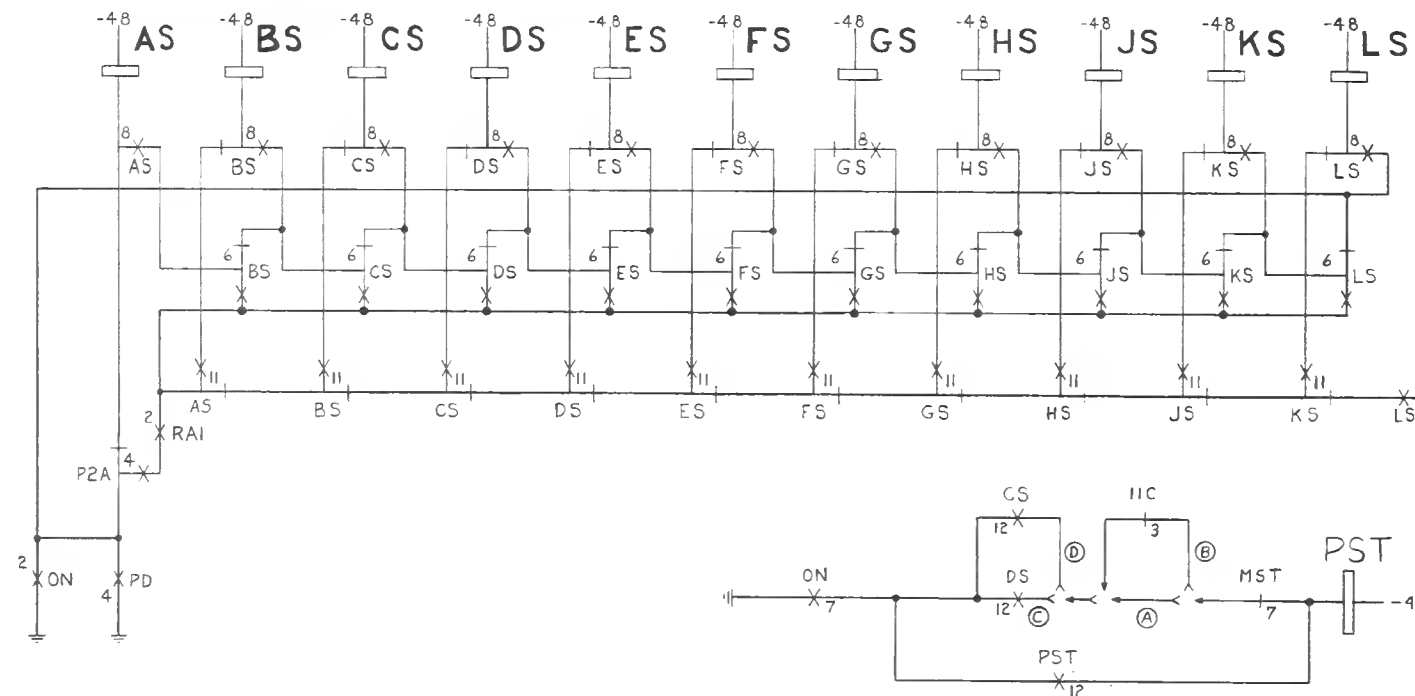


2 SHEETS, SHEET |

AMERICAN TELEPHONE & TELEGRAPH CO.

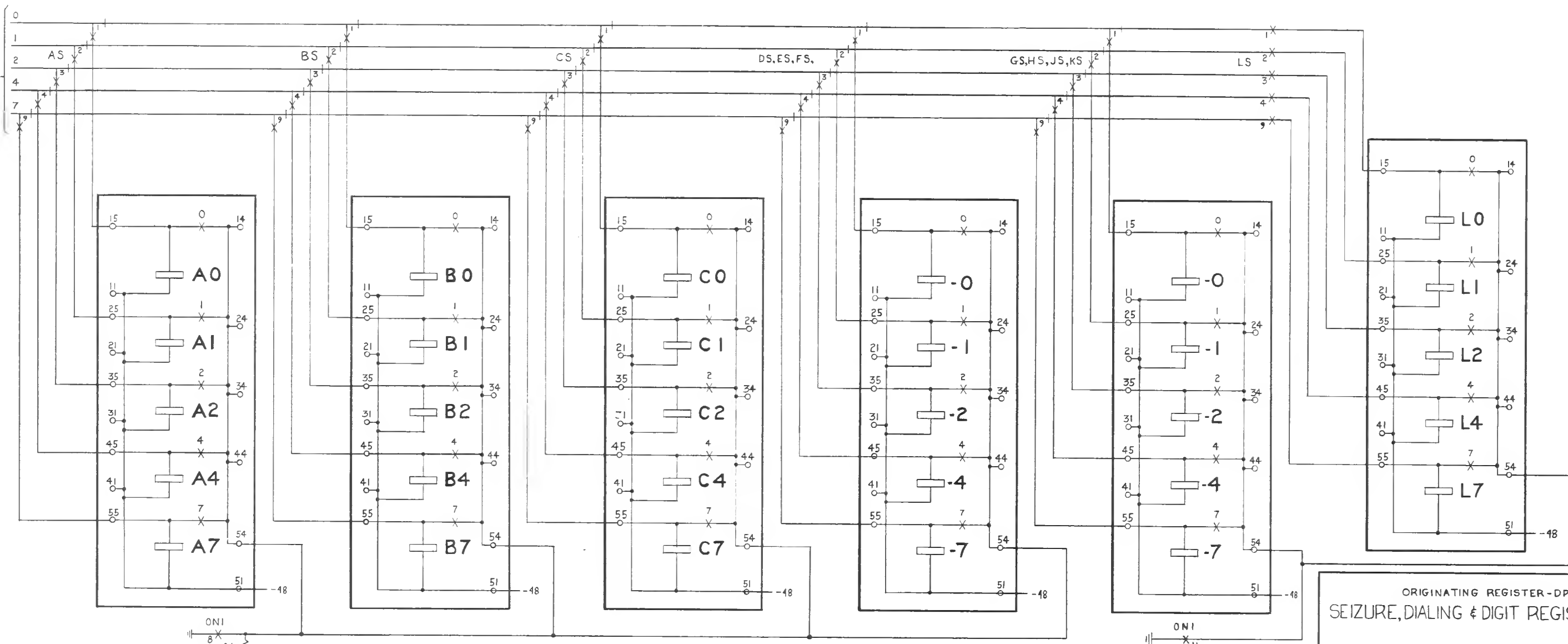
PRINTED IN U. S. A.



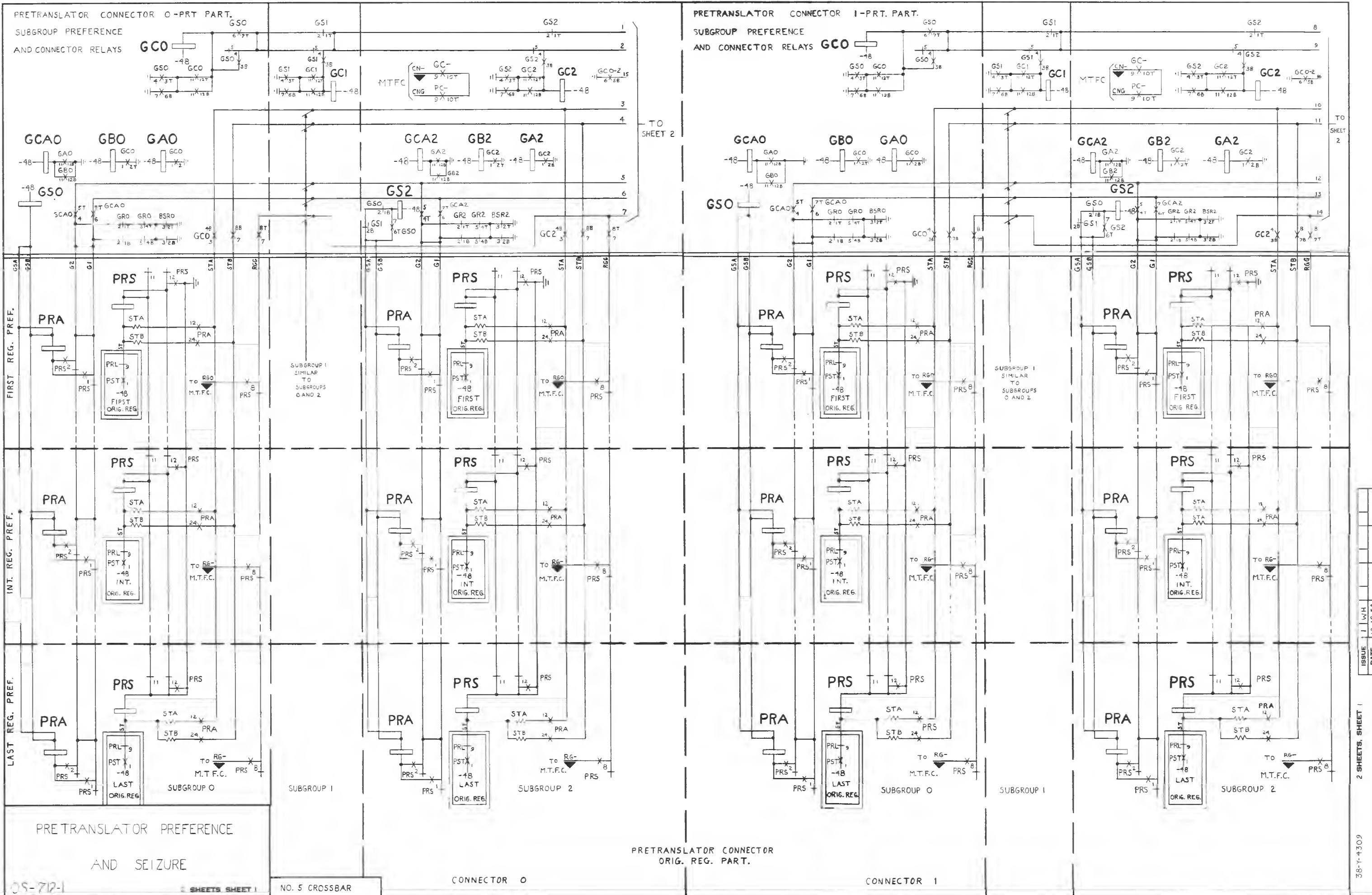


OPTIONS.	
PREFIX COUNTER	NOT REQUIRED
WHERE PRE-TRANSLATORS ARE REQUIRED AND 2 DIGIT STFW. CODES ARE NOT DIALED.	REQ. FOR II FOREIGN AREA DIRECTING CODES AND PRETRANSLATOR DOES NOT TRANSLATE II CODES.
WHERE PRE-TRANSLATORS ARE REQUIRED AND 2 DIGIT STFW. CODES ARE DIALED (2 DIGIT AREA F.A.C.D. NOT REQD)	PRETRANSLATOR SEIZED AFTER 3RD REGISTERED DIGIT.
	PRETRANSLATOR SEIZED AFTER 2ND REGISTERED DIGIT.

NOTE 1	
PULSE	L P1 P2 P3 P4 P5 P- RELAYS REMAINING OPERATED OUTPUT LEADS GROUNDED
1 BK MK	R O O P1 P2 0 1
2 BK MK	R O R 0 P3 0 2
3 BK MK	R O O 0 P1 P2 P3 P4 1 2
4 BK MK	R O R R P3 P4 0 4
5 BK MK	R O O R P1 P2 P4 1 4
6 BK MK	R O R 0 P4 P5 2 4
7 BK MK	R O O 0 P1 P2 P4 P5 0 7
8 BK MK	R O R 0 P3 P4 P5 1 7
9 BK MK	R O O R P1 P2 P3 P5 2 7
10 BK MK	R O R R P3 P5 4 7
11 BK MK	R O O R P1 P2 P5 0
12 BK MK	R O R P5 0



ORIGINATING REGISTER-DP
SEIZURE, DIALING & DIGIT REGISTRATION



OS-712-1

SHEETS SHEET 1

NO. 5 CROSSBAR

CONNECTOR 0

PRETRANSLATOR CONNECTOR
ORIG. REG. PART.

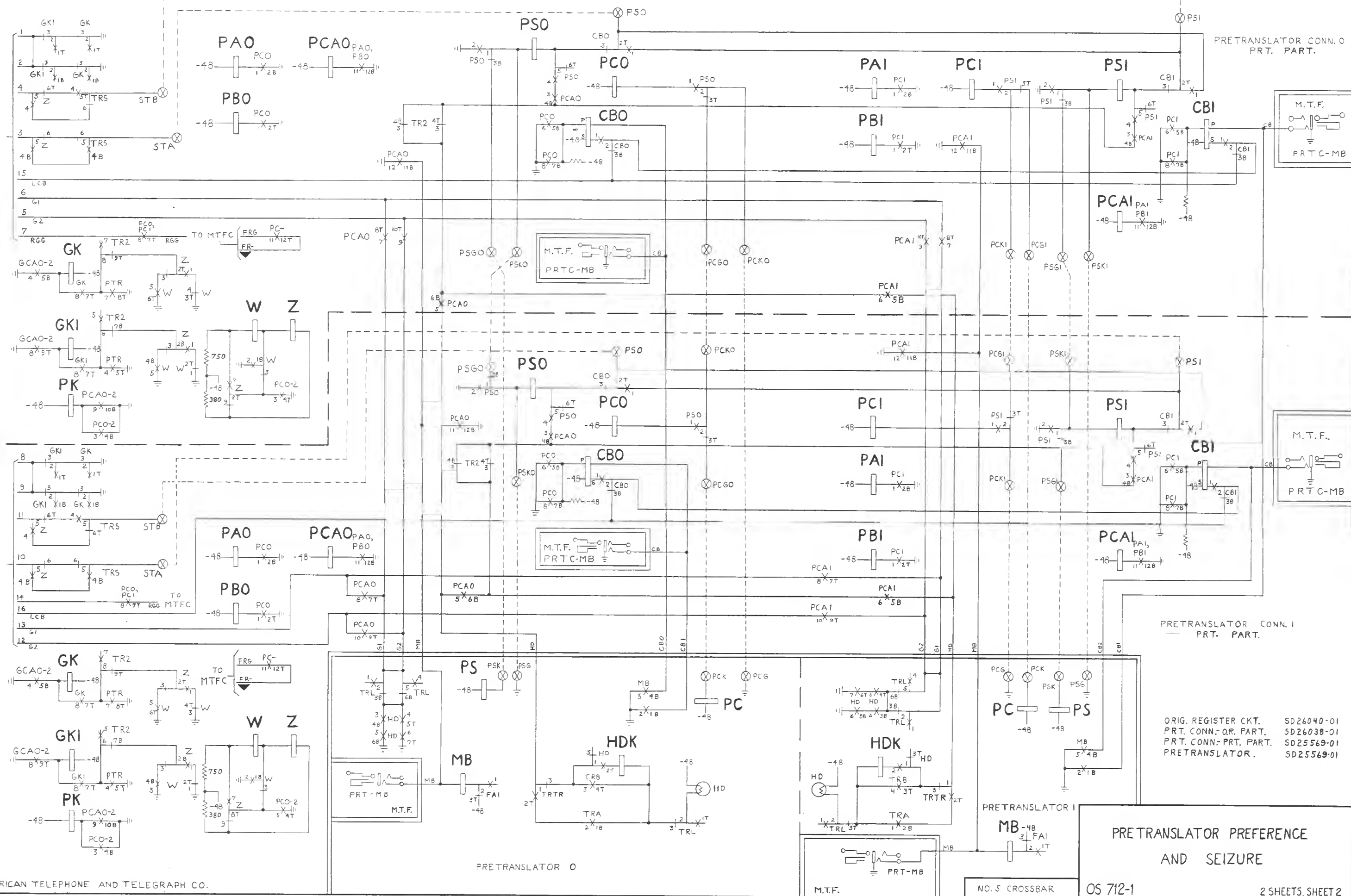
CONNECTOR 1

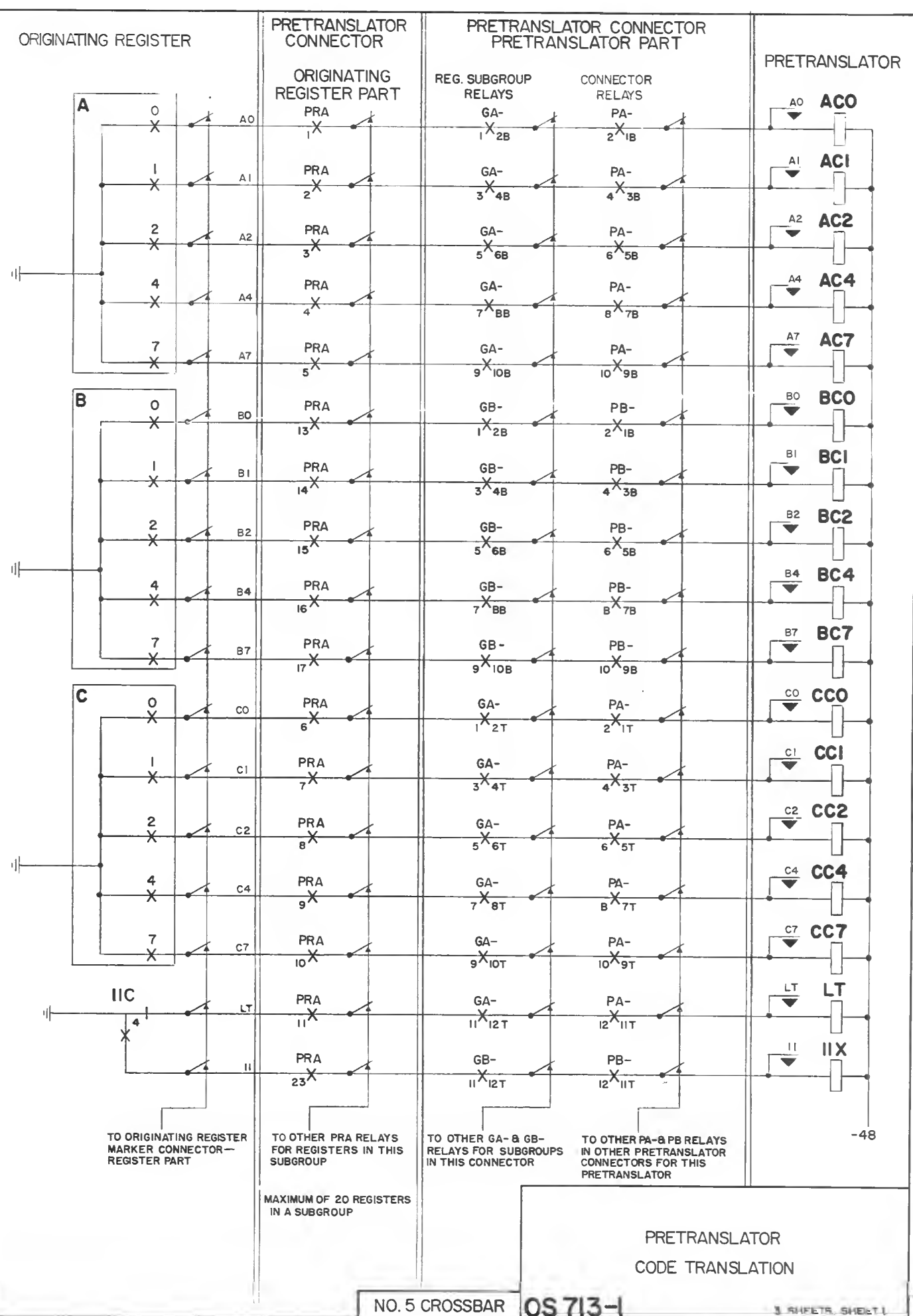
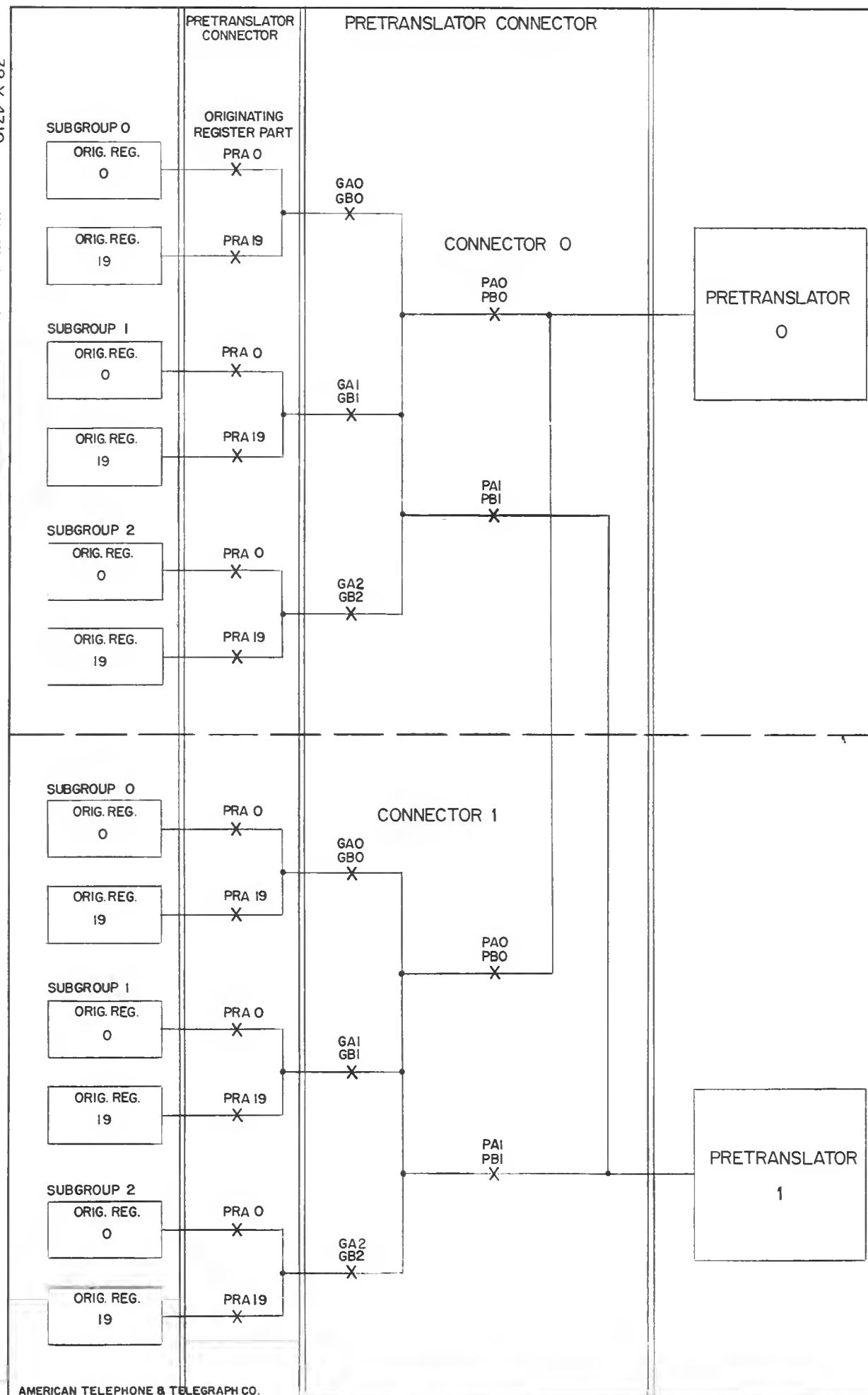
ISSUE 1
DATE 12-16-54

2 SHEETS, SHEET 1

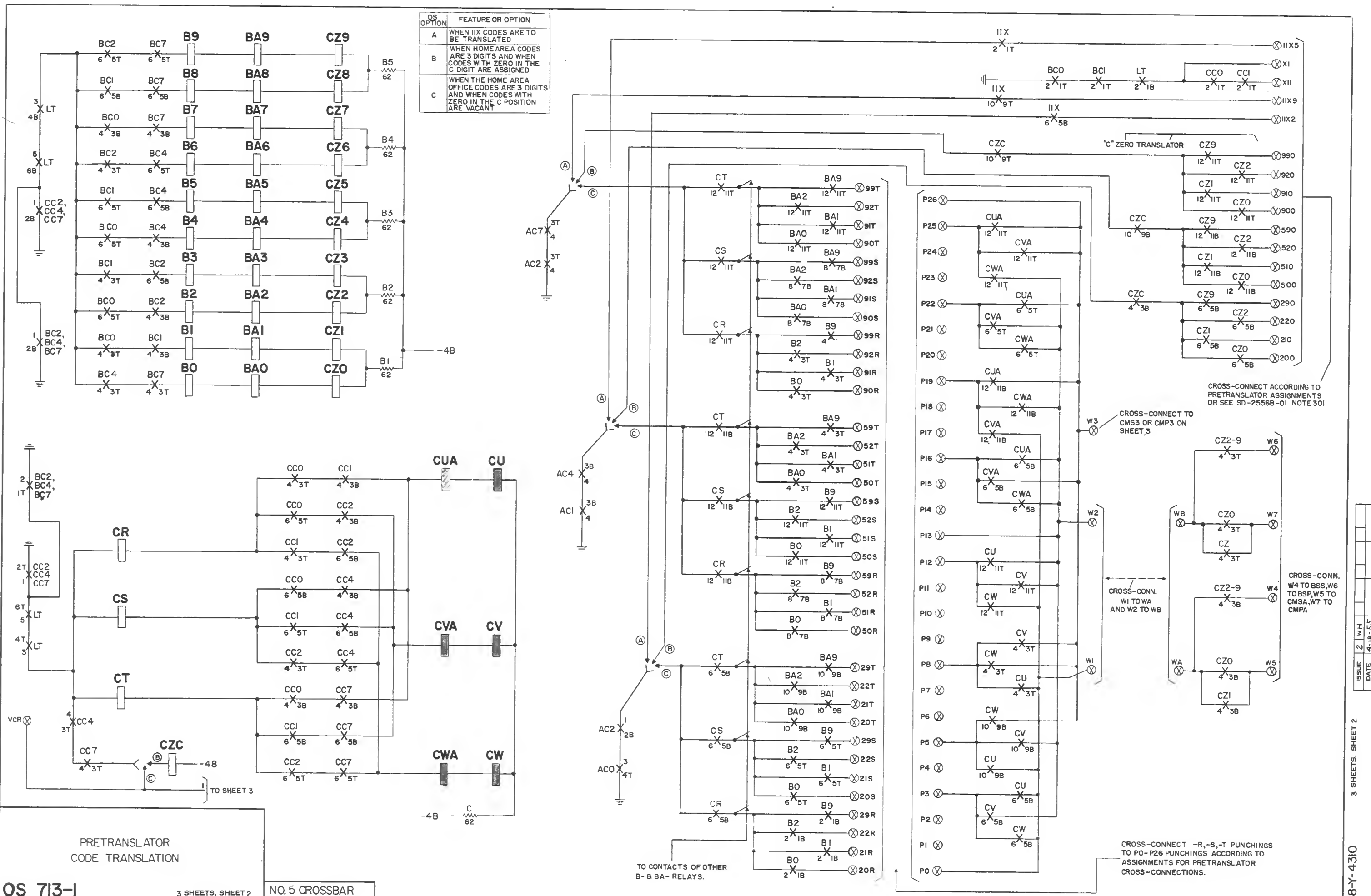
38-Y-4309

ISSUE	1	W/H			
DATE	12-16-54				





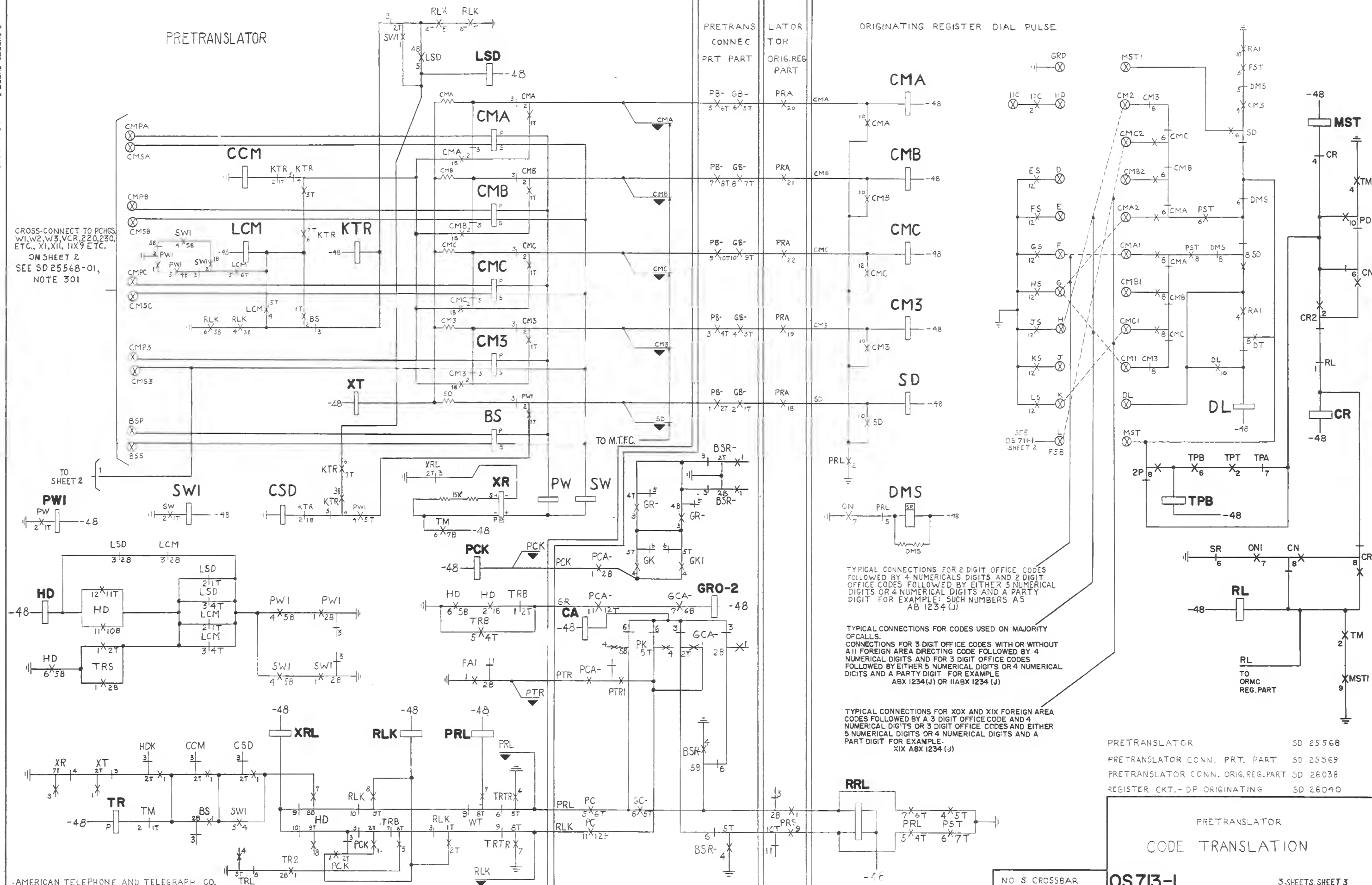
OS OPTION	FEATURE OR OPTION
A	WHEN IIX CODES ARE TO BE TRANSLATED
B	WHEN HOME AREA CODES ARE 3 DIGITS AND WHEN CODES WITH ZERO IN THE C DIGIT ARE ASSIGNED
C	WHEN THE HOME AREA OFFICE CODES ARE 3 DIGITS AND WHEN CODES WITH ZERO IN THE C POSITION ARE VACANT



ISSUE	2	W/H
DATE	4-18-55	

ISSUE	1	W H	2	W.H.		
DATE	12-16-54		4-18-55			

CROSS-CONNECT TO PCHGS.
WI, W2, W3, VCR, 220, 230,
ETC., XI, XII, IIX9 ETC.
ON SHEET 2
SEE SD 25568-01,
NOTE 301

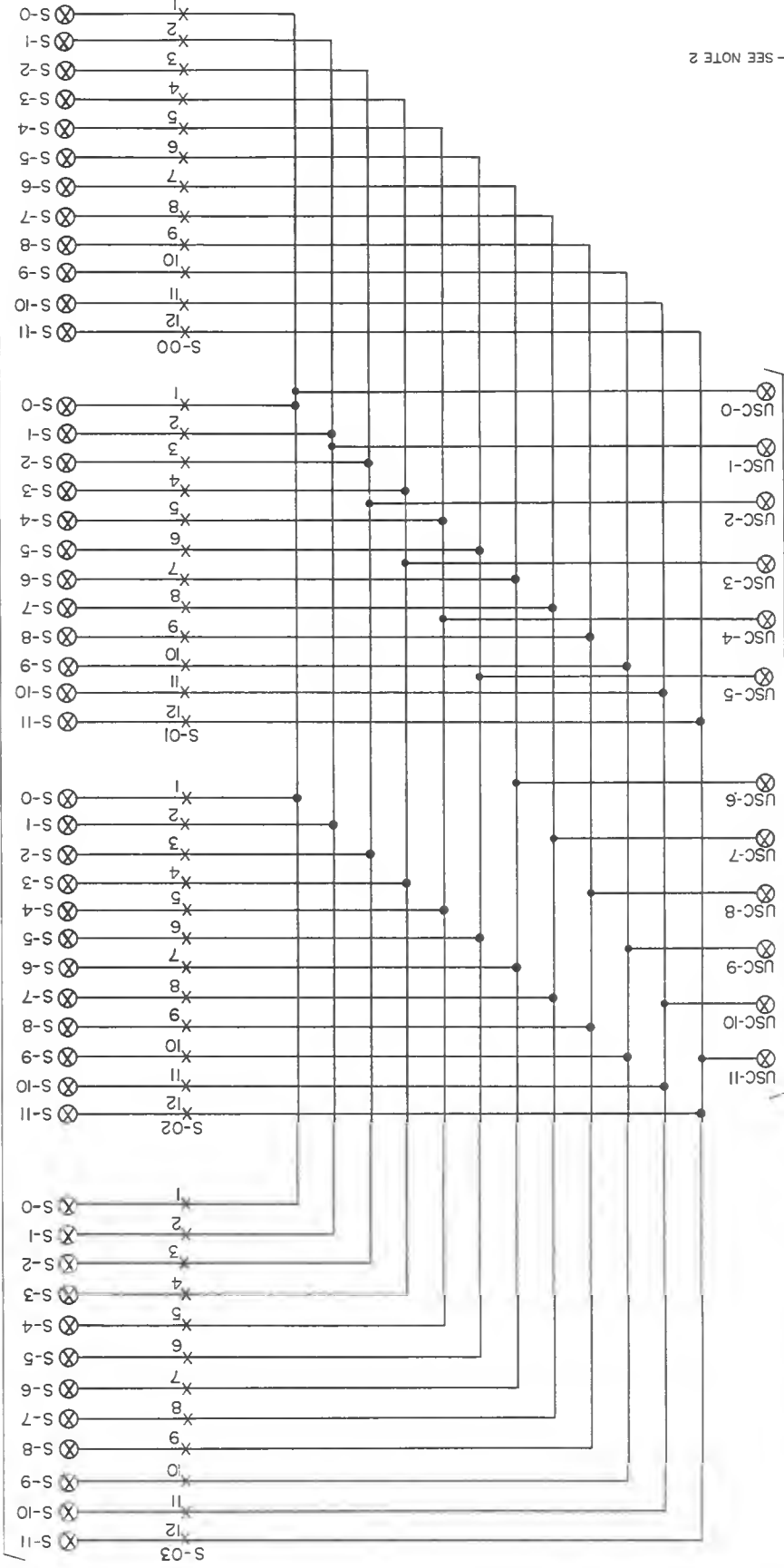


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NO 5 CROSSBAR

OS 713-1

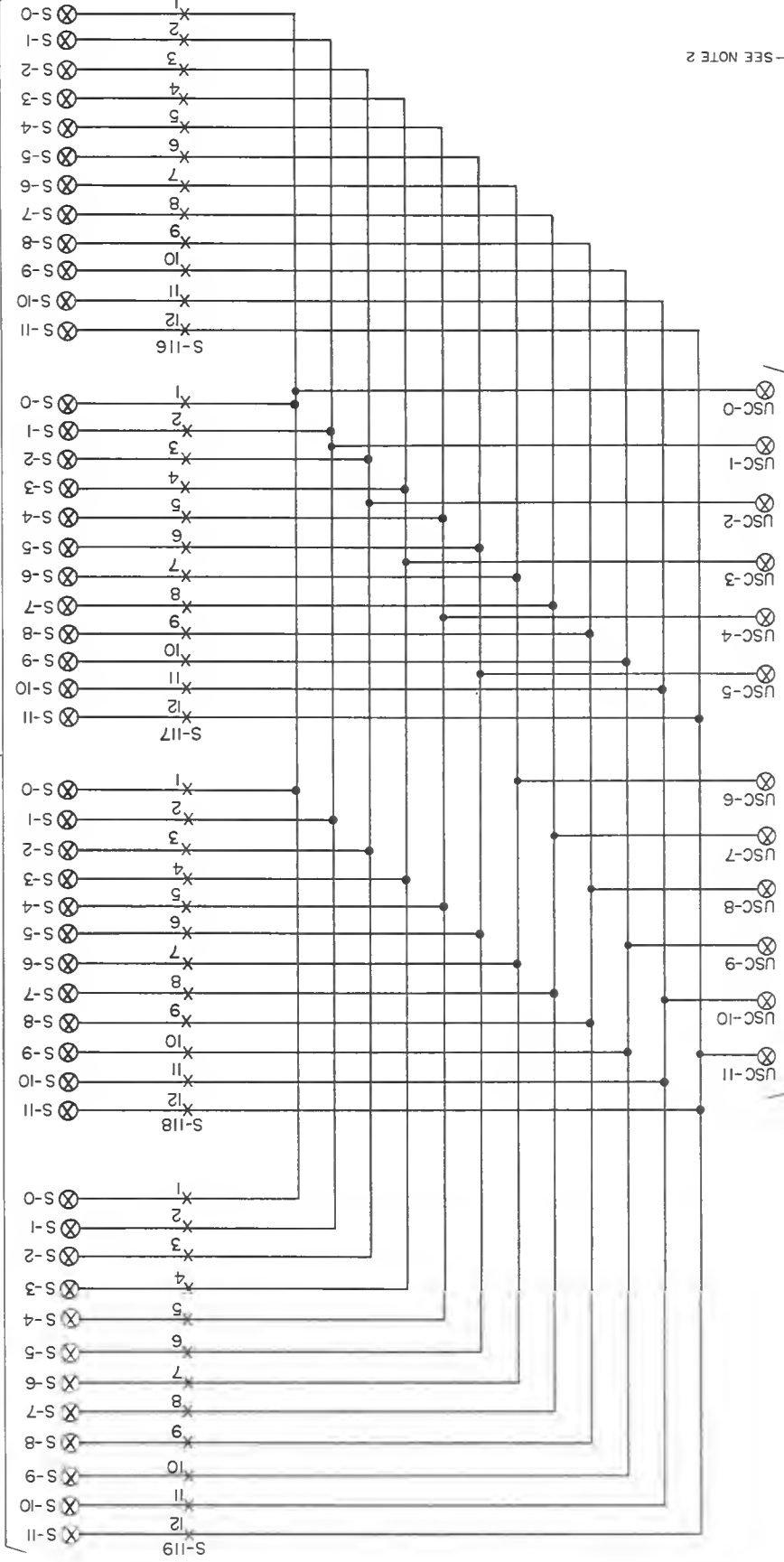
3 SHEETS, SHEET 3



SEE NOTE 2

SEE NOTE 2

SEE NOTE 2



SEE NOTE 2

NOTES

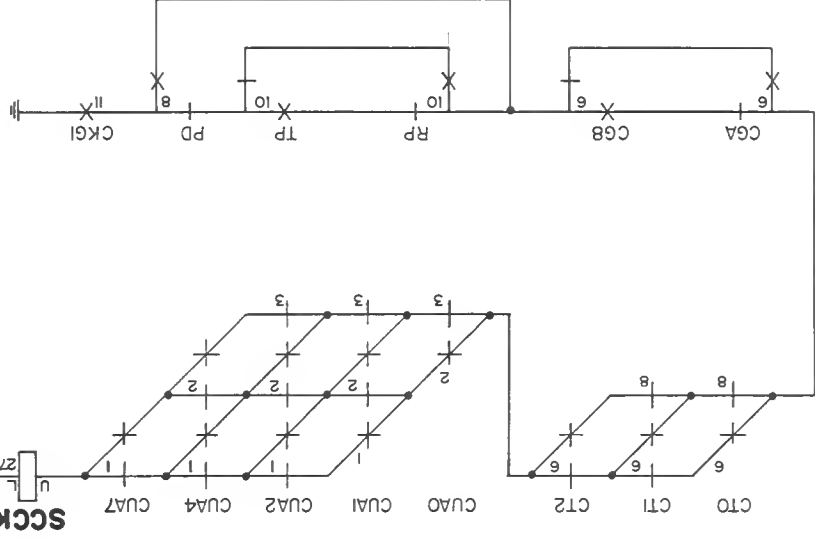
1. THESE PUNCHINGS ARE GROUNDED
SIMILARLY TO THE EXAMPLE SHOWN,
PUNCHING SWC-7, FOR DETAILS OF
OTHER SWC - PUNCHINGS, SEE
SD 26002 FS-11.

2. FOR CROSS CONNECTIONS TO S-8
USC - PUNCHINGS SEE OS-716-1

3. IN SORT 2, THOSE CLASSES OF SERVICE
WHICH RECEIVE THE SAME ROUTE SERVICE
TREATMENT ARE GROUPED, FOR EXAMPLE,
PO 5 P8X, IF, 2F, ALL USE S-28 SCREENING
RELAY IN SORT 2.

4. RELAY S28 SERVES POS CLASSES P8X,
IF, 2F, RELAYS S30, 36, 38 ALSO SERVE
THREE CLASSES EACH.

5. CROSS-CONNECT CSA1 TO CGA1 AND CSA2
TO CGA2 WHEN SIXTY CLASSES OF SERVICE
ARE PROVIDED, FOR THIRTY CLASSES OF
SERVICE, CROSS-CONNECT CSA1 TO CGA0
AND CSA2 TO CGA0.



MULTIPLE OF S-RELAY CONTACTS		
S-RELAYS	S-RELAYS	S-RELAYS
0-3	40-43	80-83
4-7	44-47	84-87
8-11	48-51	88-91
12-15	52-55	92-95
16-19	56-59	96-99
20-23	60-63	100-103
24-27	64-67	104-107
28-31	68-71	108-111
32-35	72-75	112-115
36-39	76-79	116-119

CLASS OF SERVICE AND SCREENING RELAY CONNECTIONS

OS 714-1

NO. 5 CROSSBAR

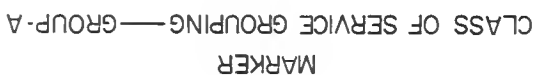
3 SHEETS, SHEET 2

MARKER
ORIGINATING REGISTER
SD 26040-01 ISS. 3D
SD 26040-01 ISS. 3D
SD 26024-01 ISS. 4D

ORIG. REG. MKR. CONN. - REG. PART
SD 26024-01 ISS. 4D

NO. 5 CROSSBAR

TWO CENTRAL OFFICES — PODUNK 5, 6



[illegible]

ROUTE RELAY ASSIGNMENTS

MISCELLANEOUS ASSIGNMENTS USED ON OS-716-1

AMERICAN TELEPHONE & TELEGRAPH CO.
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00-02-211-POS, NON-COIN	14-DIAL "O" POS PBX, IND.
01-02-211-POS COIN	15-DIAL "O" POS 4F
02-211-POS NON-COIN	16-DIAL "O" POS COIN
03-211-POS COIN	17-DIAL "O" POS PBX, IND. 2
04-TONE NON-COIN	18-DIAL "O" POS 4F
05-SPARE	19-DIAL "O" POS COIN
06-PERMANENT SIGNAL	20-1A0 COIN
07-COMMON OVERFLOW	21-1A0 MR
08-TONE COIN	22-811 BUSINESS OFFICE
09-SPARE	23-REVERTING CALL
10-1A0 FR	24-TANDEM CHARGE O
11-VACANT CODE NON-COIN	25-TANDEM CHARGE 9
12-VACANT CODE COIN	26-411- INFORMATION
13-COIN JUNCTIONS	27-611- REPAIR SERVICE

28- RINGER TEST NON-COIN
29- RINGER TEST COIN
30- OLYMPIC 3 - FLAT RATE
31- MISSION-3
32- BARING-2
33- MURDOCK 6,7
34- OLYMPIC-3-COIN
35- OLYMPIC-3-MR
36- OLYMPIC-3-TOLL
22- 811 BUSINESS OFFICE
21- IAO MR
20- IAO COIN
19- DIAL O'PO6 COIN
18- DIAL O'PO6 4F
17- DIAL O'PO6 PBX,IND,2P-FR/MR
16- DIAL O'PO5 COIN
15- DIAL O'PO5 4F
14- DIAL O'PO5 PBX,IND,2P-FR/MR

CG	XC TO	RG	XC TO
0		0	SC02
1		1	SC15
2			

9	XC TO	00	RC10	01	RC21	02	RC03	03	NN	04	RC04	05	RC14	06	050	RC17	08	051	RC28	10	RC11	11	RC04	12	RC23	13	RC30
---	-------	----	------	----	------	----	------	----	----	----	------	----	------	----	-----	------	----	-----	------	----	------	----	------	----	------	----	------

DR	0	1	2	3	4
	LR	PB			
	RAG- XC TO				

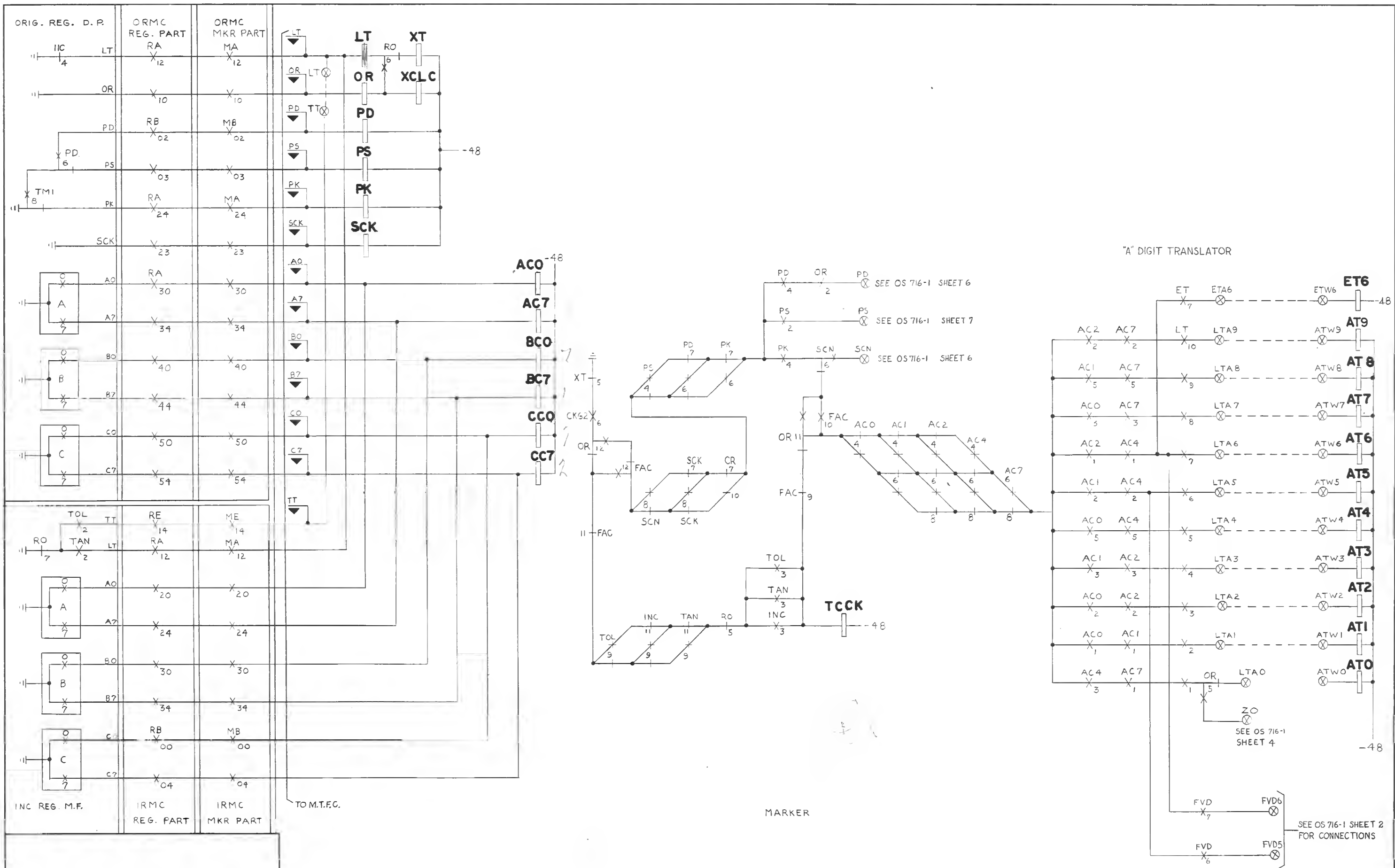
RESTRICTED 4F
COIN JUNCTION
RESTRICTED COIN
TOLL & TANDEM DENY ROUTE

CLASS OF SERVICE
AND
SCREENING RELAY CONNECTIONS

OS 714-1

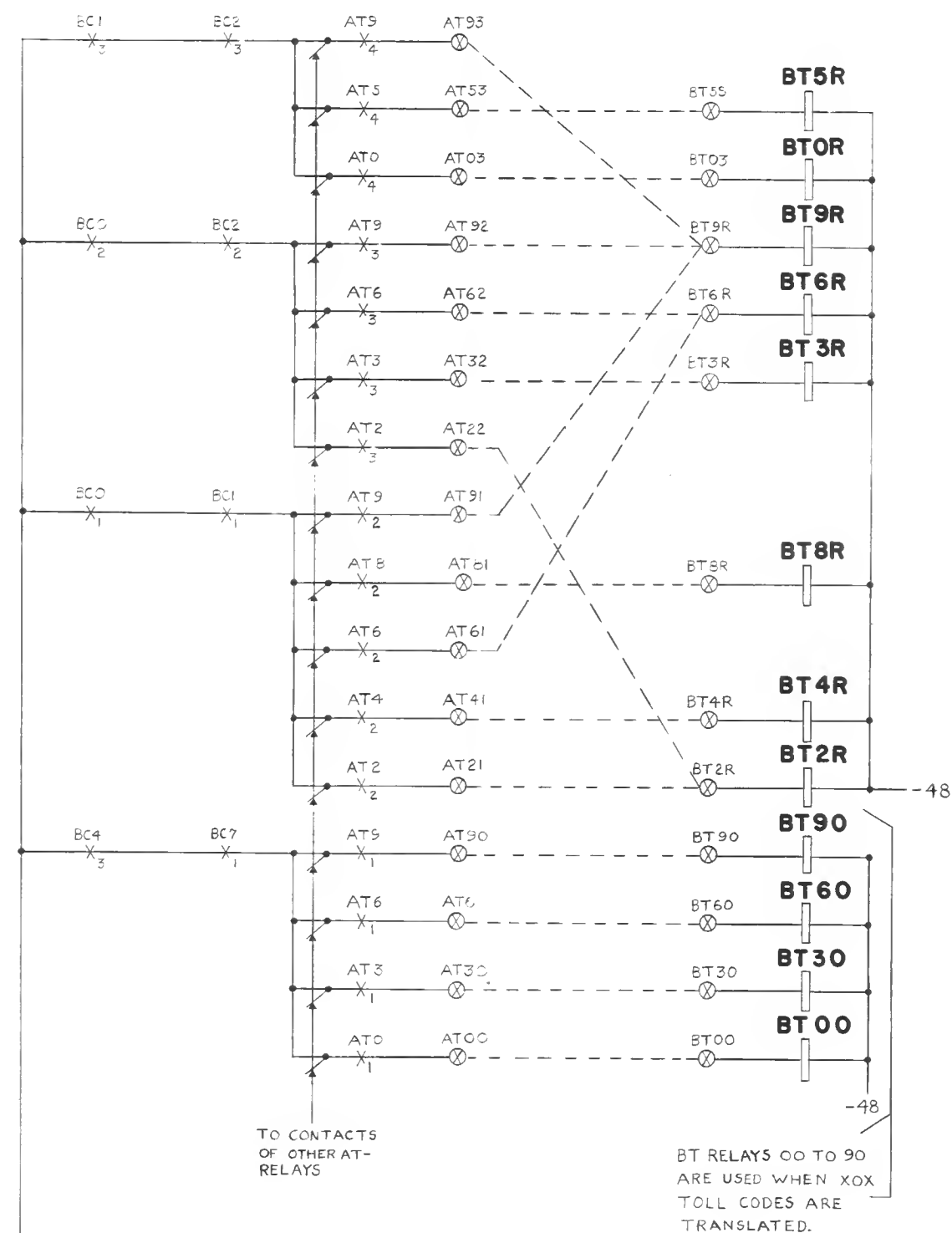
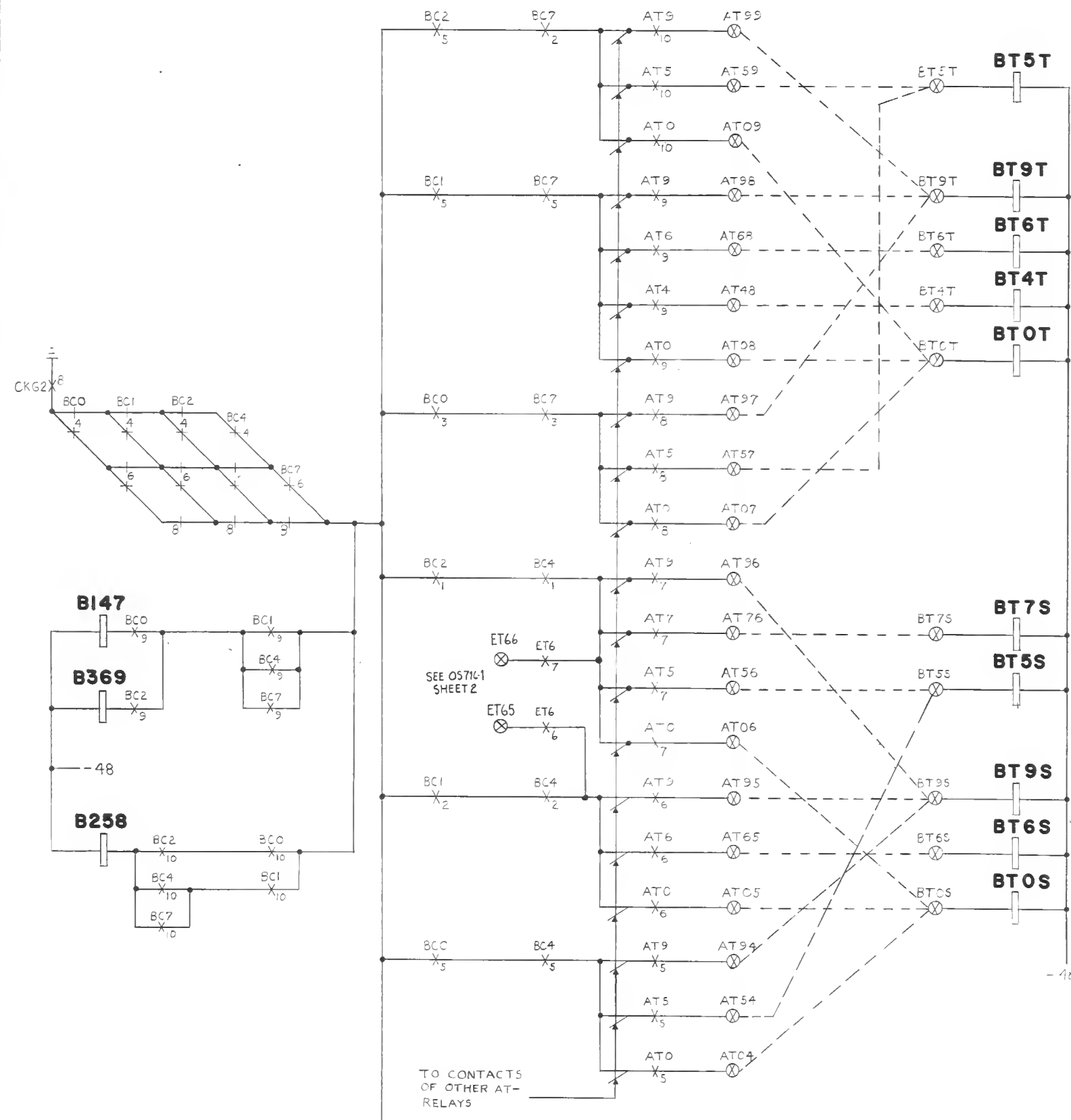
NO. 5 CROSSBAR

3 SHEETS, SHEET 3



ISSUE	1	W/H			
DATE	4-18-55				

MARKER



COMP. MARKER SD 26002-01 155 1

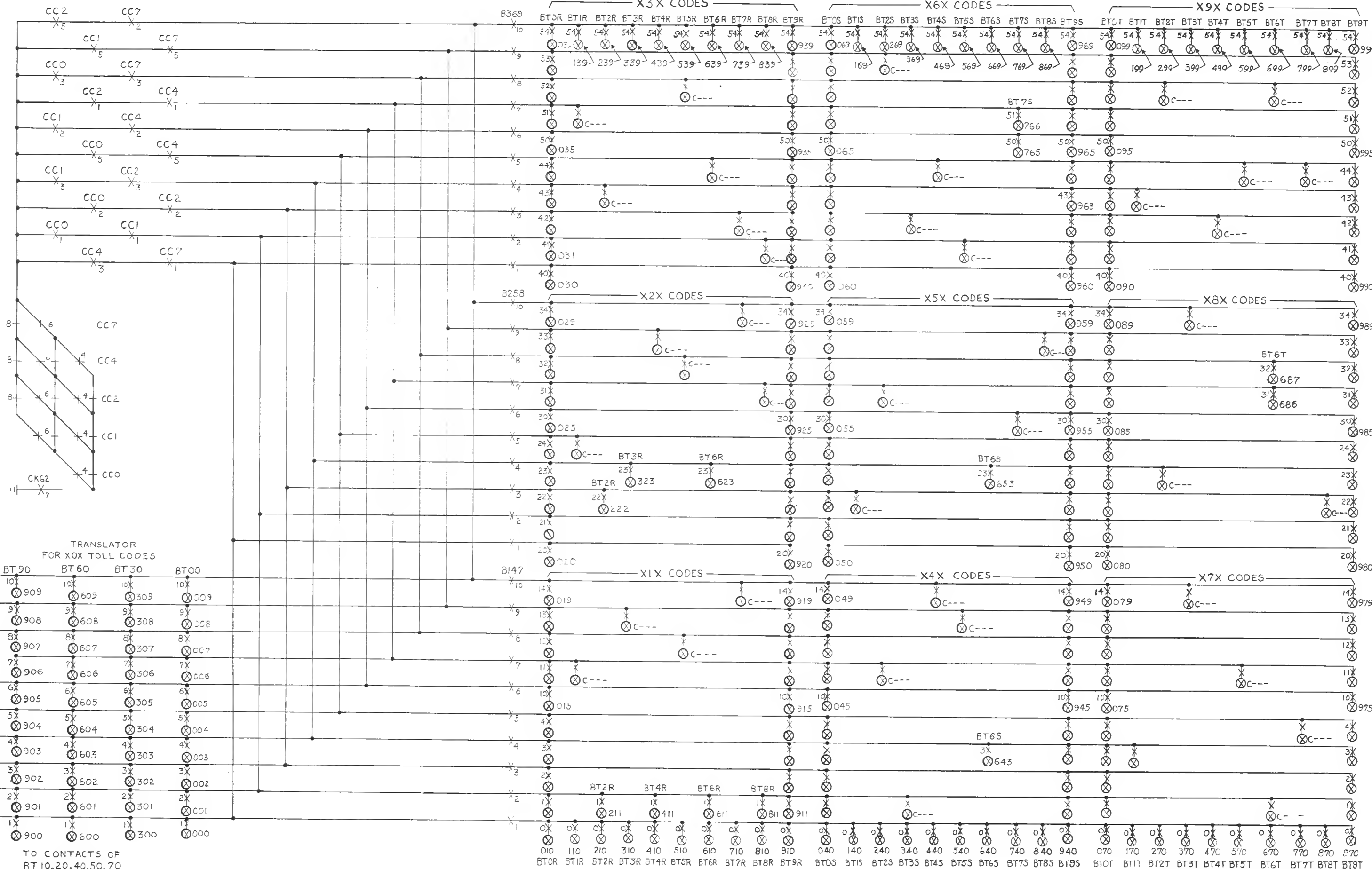
GROUNDING CODE POINTS

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
PRINTED IN U. S. A.

NO. 5 CROSSBAR

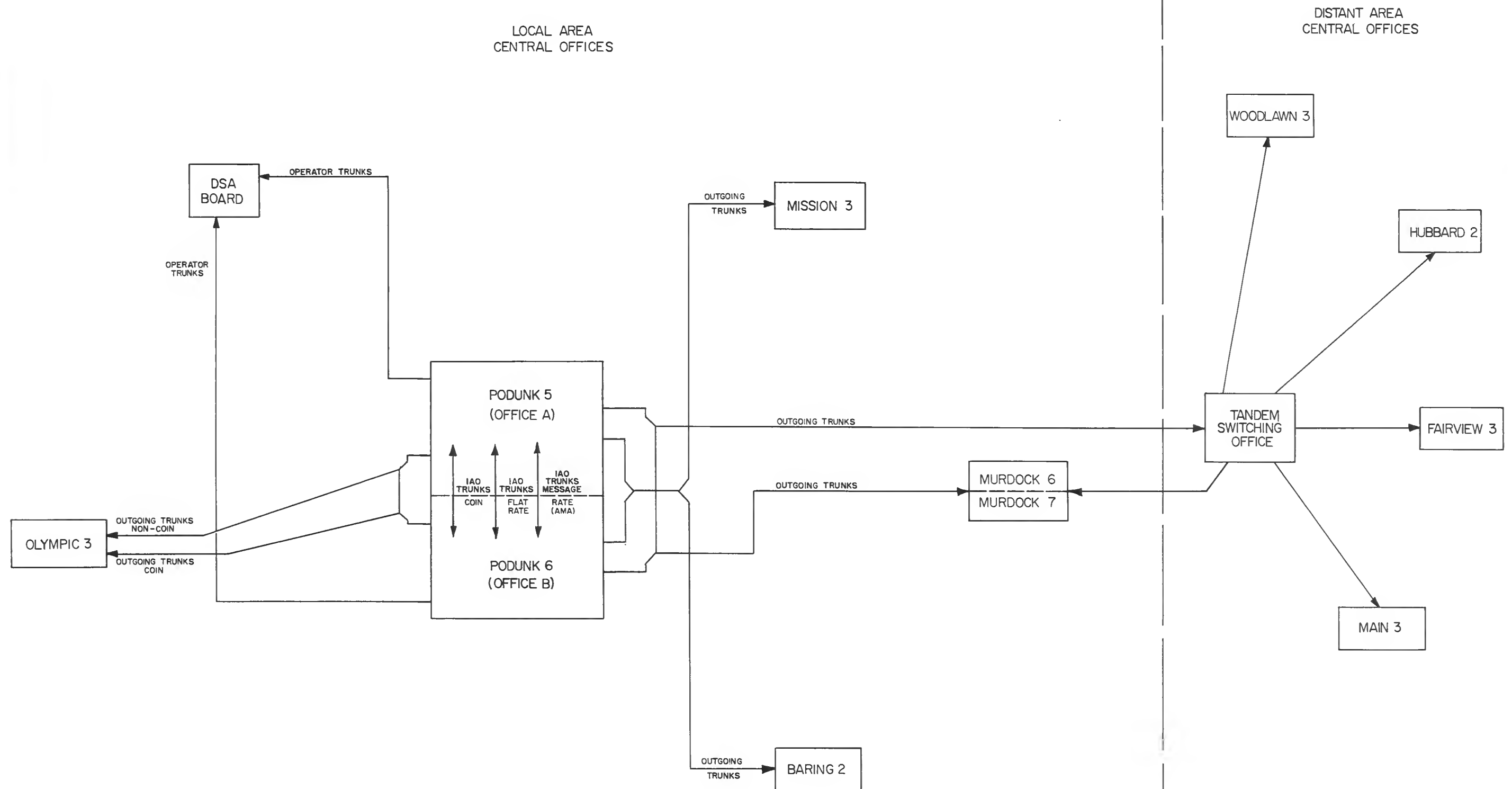
OS 715-1

3 SHEETS, SHEET 2



MARKER C DIGIT TRANSLATOR

ISSUE	1	W.H.				
DATE	4-14-55					

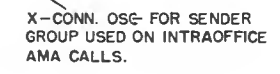


[Handwritten signature]

SEE OS-715-1
SHEET 3

SEE OS-715-I
SHEET 1

SEE OS-715-1
SHEET 2



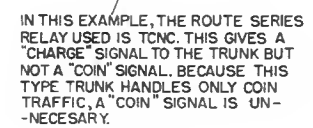
SD 26002 ISS. /

OS 716-1

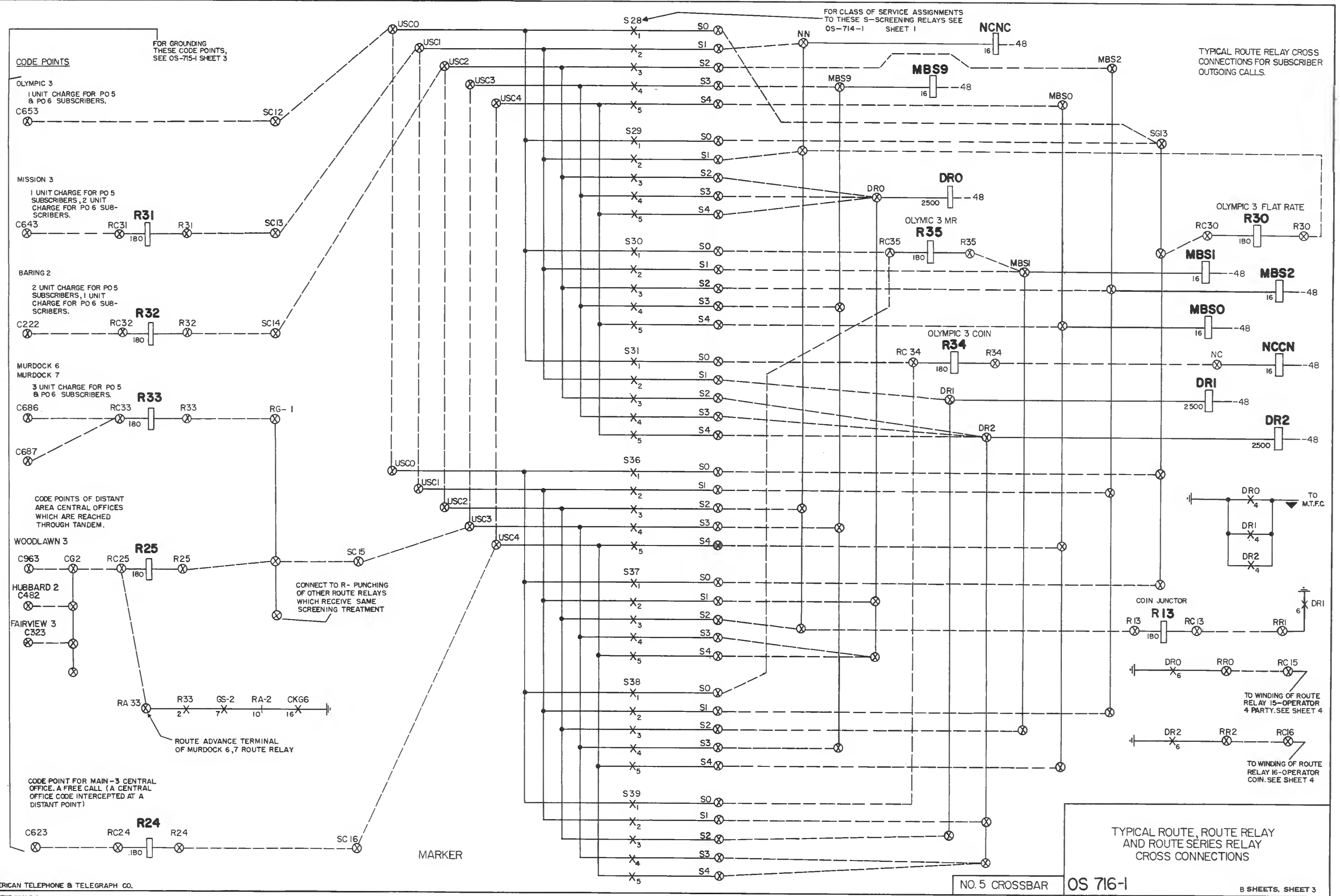
8 SHEETS, SHEET 2

NO. 5 CROSSBAR

TYPICAL ROUTE RELAY CROSS CONNECTIONS
FOR INTRA OFFICE ROUTE. SEPARATE INTRA
OFFICE TRUNKS USED FOR FLAT RATE, MESSAGE
RATE (AMA), AND COIN SERVICE.



ISSUE	1	W.H.
DATE	4-18-55	



CODE POINTS

"O" OPERATOR
Z0

CG-1

CROSS CONNECT
TO RESTRICTED CODE
PUNCHINGS C---

C85 X10 PEG X7 CLC

TYPICAL ROUTE RELAY CROSS
CONNECTIONS FOR DIAL "O" OPERATOR
AND CLASS OF SERVICE PEG COUNT.

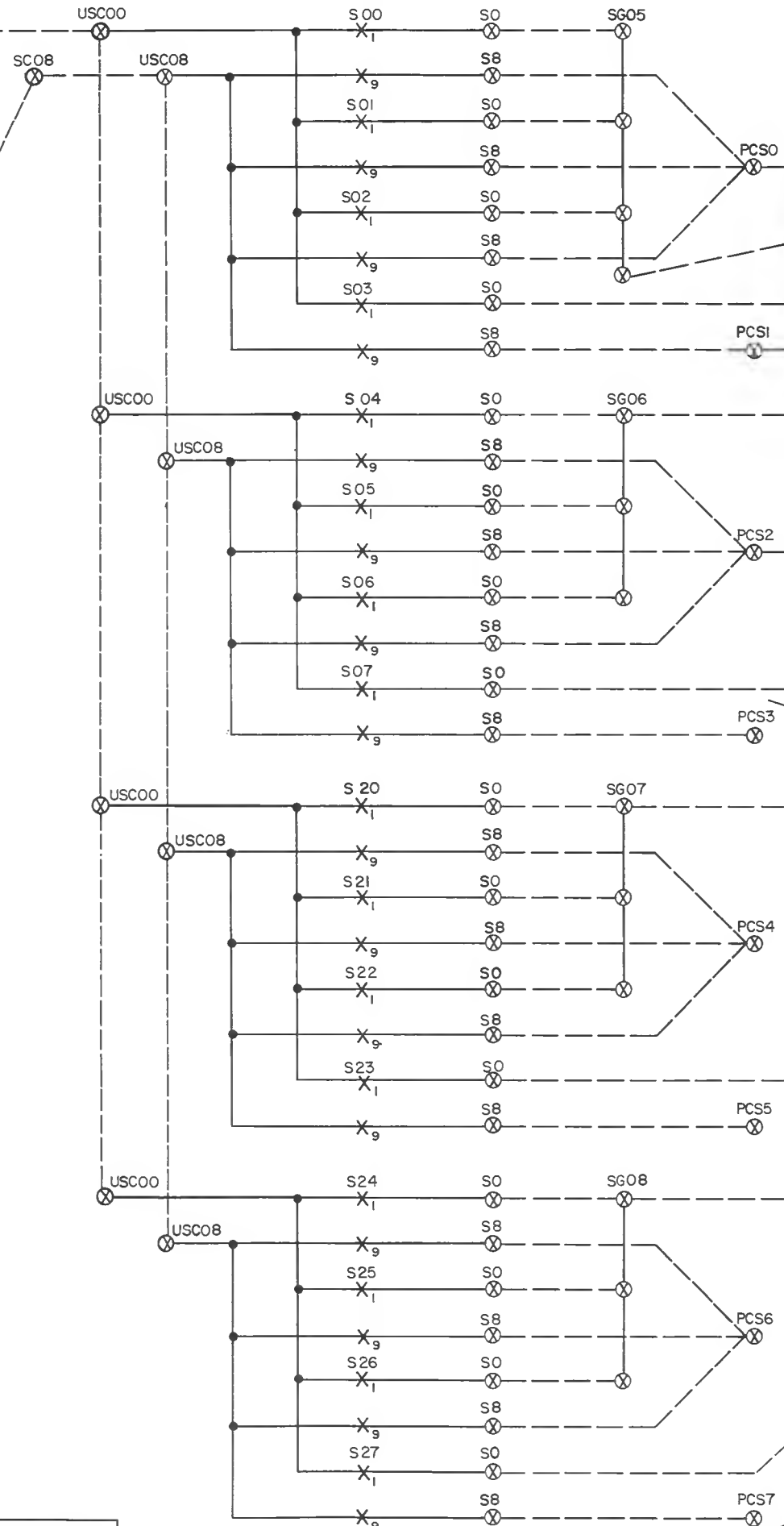
MARKER

TYPICAL ROUTE, ROUTE RELAY
AND ROUTE SERIES RELAY
CROSS CONNECTIONS

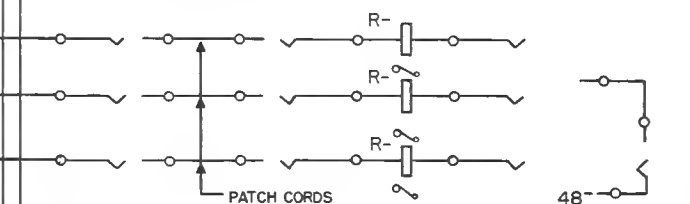
OS 716-1

8 SHEETS, SHEET 4

NO. 5 CROSSBAR



TRAFFIC REGISTER CABINET



DIAL "O"
PO 5 PBX, IND, 2P-FR & MR

R14

R15

DIAL "O"
PO 5 4 PARTY

OPS0

OP0

OPI

DIAL "O"
PO 5 COIN

R16

DIAL "O"
PO 6 PBX, IND, 2P-FR & MR

R17

DIAL "O"
PO 6 4 PARTY

R18

OPS1

DIAL "O"
PO 6 COIN

R19

OPR

TO
M.T.F.C.

NCNC

RR

IF ORIGINATING REGISTER IS EQUIPPED TO
RETURN COIN ON A CALL TO THE OPERATOR,
CROSS-CONNECT R16 AND R19 TO CC.
IF REGISTER IS NOT EQUIPPED TO DO THIS,
THEN THE COIN IS RETURNED BY THE
TRUNK. CROSS R16 AND R19 TO NN.

8 SHEETS, SHEET 4

38-Y-4328

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38-Y-4328 8 SHEETS, SHEET 5

DATE	ISSUE	1	W/H

CODE POINTS

C 211
LONG DISTANCE

INFORMATION
R26

C 411
INFORMATION

RC 26
180

R26

RG0

BUSINESS
OFFICE
R22

C 811
BUSINESS
OFFICE

RC 22
180

R22

REPAIR
SERVICE
R27

C 611
REPAIR
SERVICE

RC 27
180

R27

SEE OS-715-1 SHEET 1

SC01
SC02

USC01
USC02

S00 PBXF

S1

SG02

X₂

S2

SG03

X₃

S1

S2

S01 1F

S1

S2

X₂

S2

S1

X₃

S1

S2

S02 2F

S1

S2

X₂

S2

S1

X₃

S1

S2

S03 4F

S1

S2

X₂

S2

S1

X₃

S1

S2

S04 PBXMR

S1

S2

X₂

S2

S1

X₃

S1

S2

S05 IMR

S1

S2

X₂

S2

S1

X₃

S1

S2

S06 2MR

S1

S2

X₂

S2

S1

X₃

S1

S2

S07 COIN

S1

S2

X₂

S2

S1

X₃

S1

S2

S20 PBXF

S1

S2

X₂

S2

S1

X₃

S1

S2

S21 1F

S1

S2

X₂

S2

S1

X₃

S1

S2

S22 2F

S1

S2

X₂

S2

S1

X₃

S1

S2

S23 4F

S1

S2

X₂

S2

S1

X₃

S1

S2

S24 PBXMR

S1

S2

X₂

S2

S1

X₃

S1

S2

S25 IMR

S1

S2

X₂

S2

S1

X₃

S1

S2

S26 2MR

S1

S2

X₂

S2

S1

X₃

S1

S2

S27 COIN

S1

S2

X₂

S2

S1

X₃

S1

S2

MARKER

PO 5
211 NON COIN

R00

RC00
180

R00

NN

TYPICAL ROUTE RELAY CROSS CONNECTIONS
FOR SERVICE CODES (X11)

NCNC

16 48

CC

SCK

CR

X₄

RR

2500 48

PO 5
211 COIN

R01

RC01
180

R01

PO 6
211 NON COIN

R02

RC02
180

R02

NCCN

16 48

PO 6
211 COIN

R03

RC03
180

R03

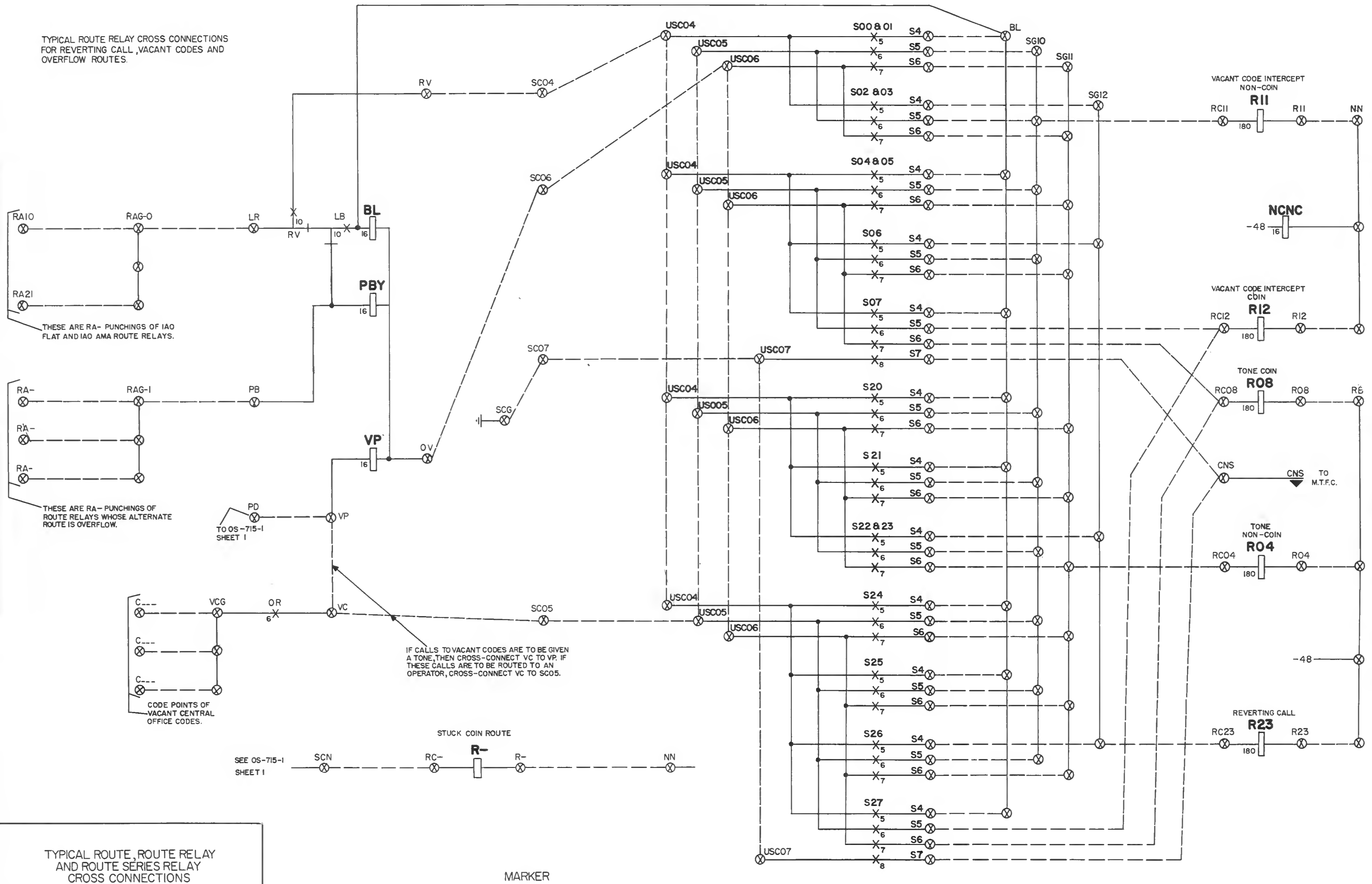
IF ORIGINATING REGISTER RETURNS
COIN ON A CALL TO THE OPERATOR,
CROSS CONNECT R01 AND R03
TO CC. IF COIN IS RETURNED BY
OPERATOR TRUNK, CROSS CONNECT
R01 AND R03 TO NC.

TYPICAL ROUTE, ROUTE RELAY
AND ROUTE SERIES RELAY
CROSS CONNECTIONS

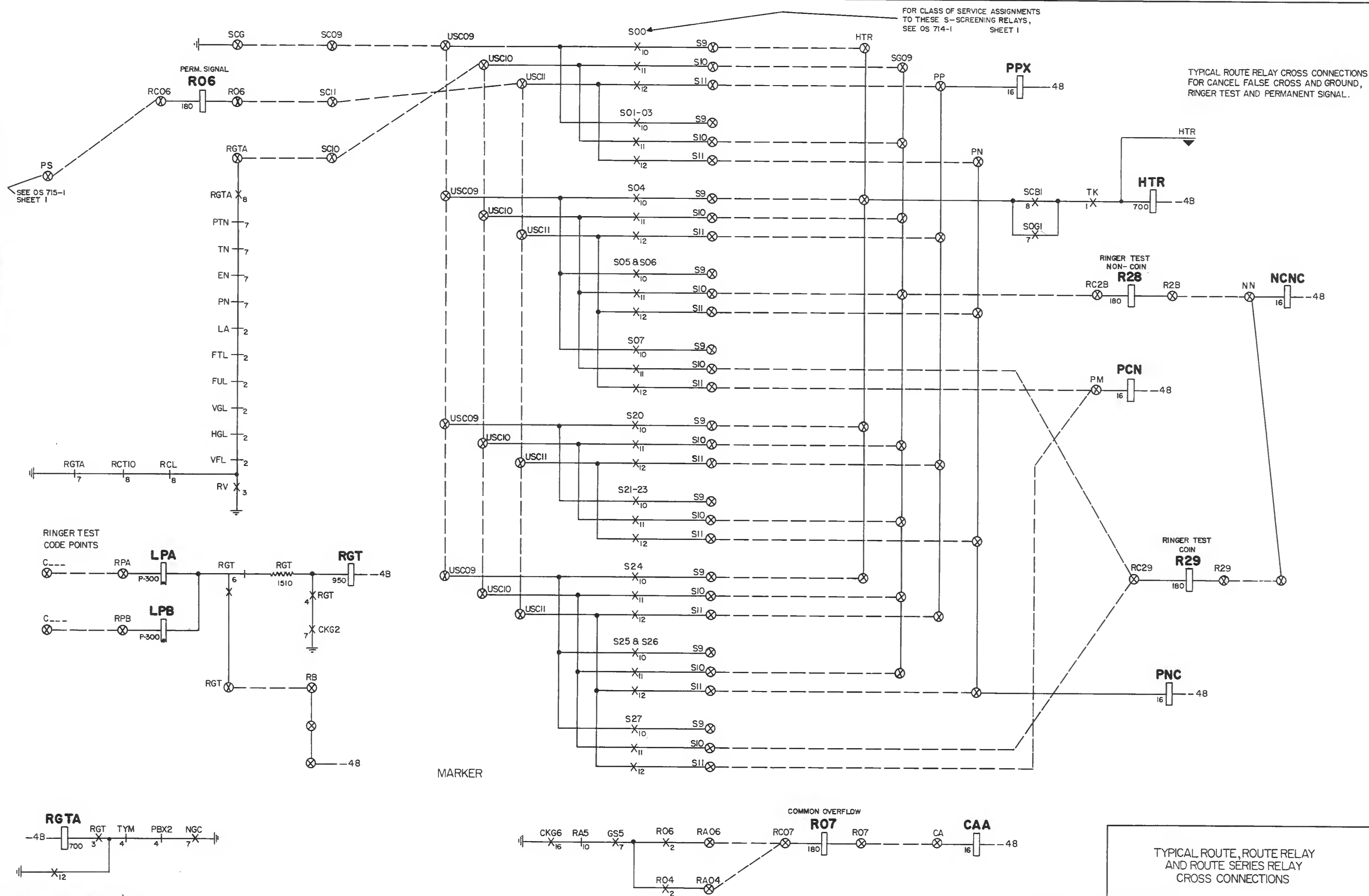
NO.5 CROSSBAR

OS 716-1

TYPICAL ROUTE RELAY CROSS CONNECTIONS
FOR REVERTING CALL, VACANT CODES AND
OVERFLOW ROUTES.



TYPICAL ROUTE, ROUTE RELAY
AND ROUTE SERIES RELAY
CROSS CONNECTIONS



TYPICAL ROUTE RELAY CROSS CONNECTIONS
FOR CANCEL FALSE CROSS AND GROUND,
RINGER TEST AND PERMANENT SIGNAL.

RINGER TEST
COIN
R29

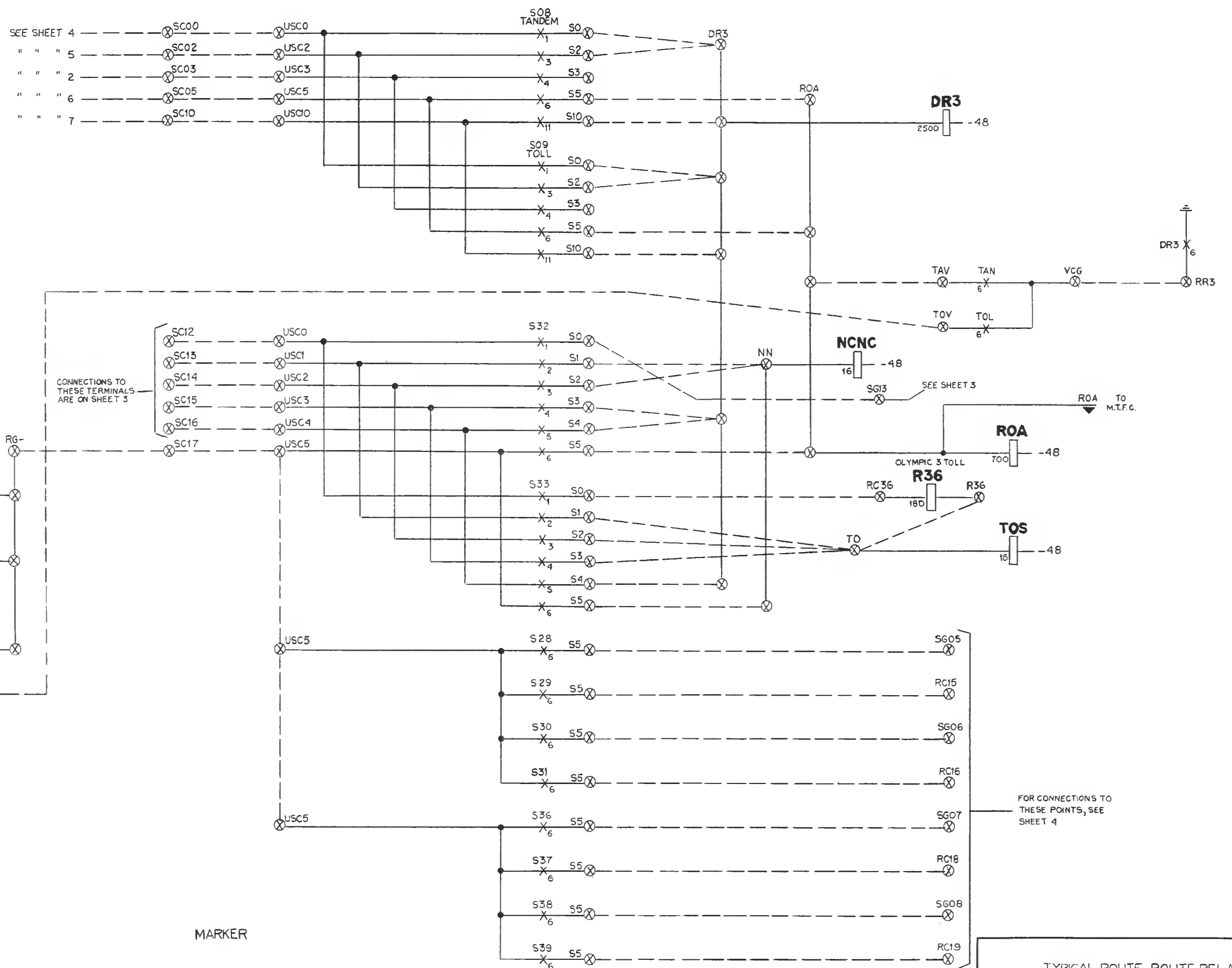
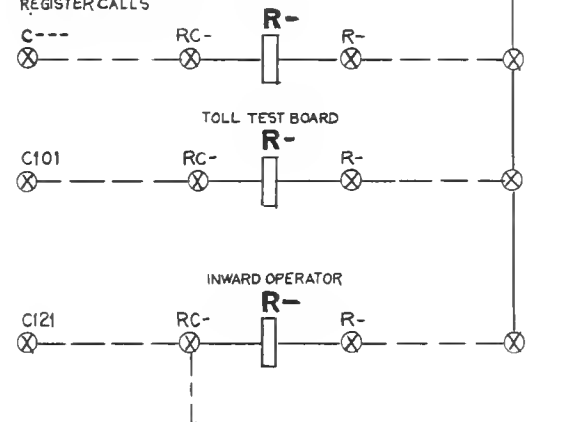
PNC

TYPICAL ROUTE, ROUTE RELAY
AND ROUTE SERIES RELAY
CROSS CONNECTIONS

ISSUE	1	1/4
DATE	4-19-55	

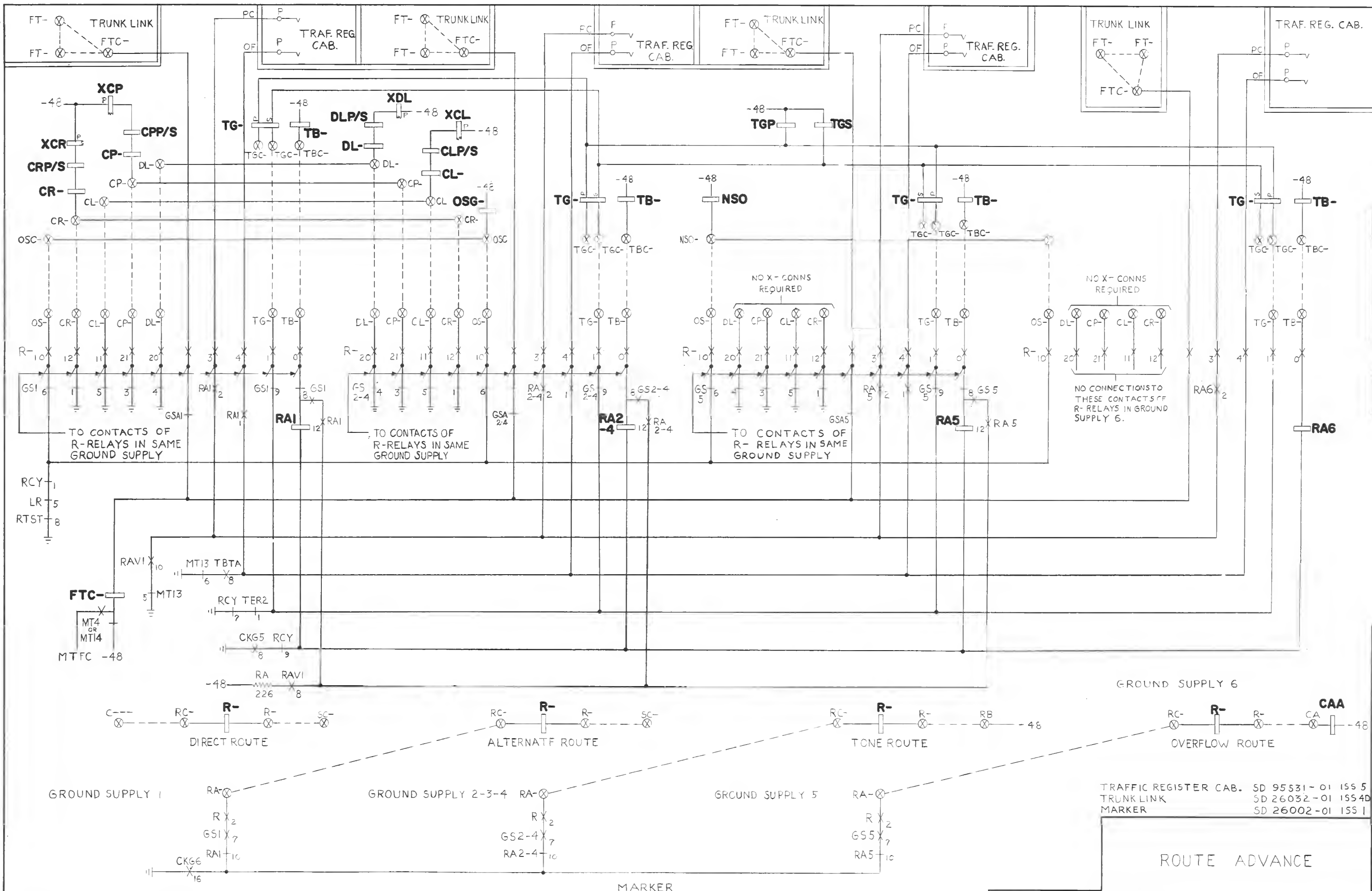
TYPICAL ROUTE RELAY CROSS CONNECTIONS
FOR TANDEM, TOLL AND SUBSCRIBER CLASS
SCREENING.

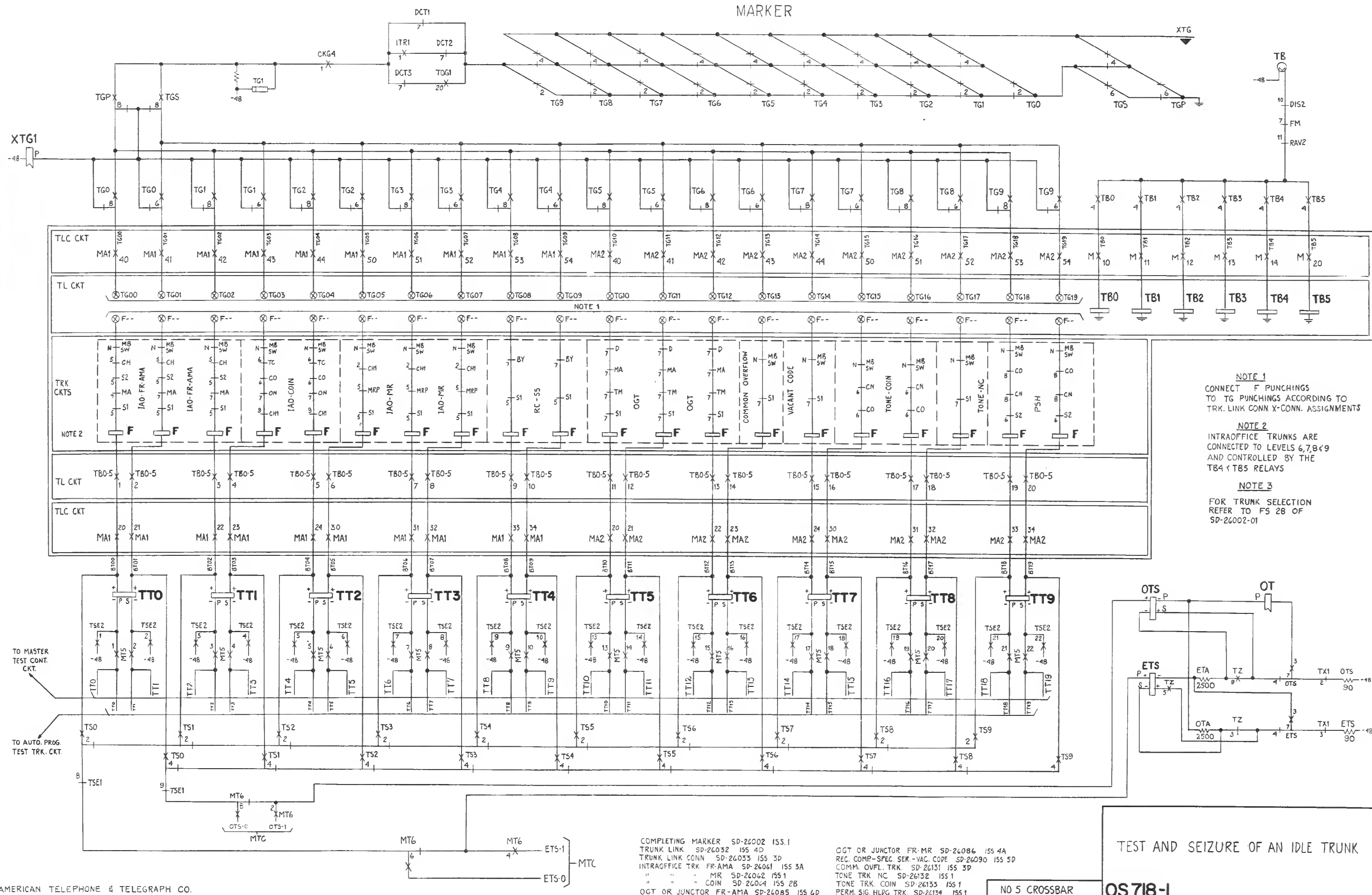
CODE POINTS OF TOLL CODES
EXPOSED TO ORIGINATING
REGISTER CALLS

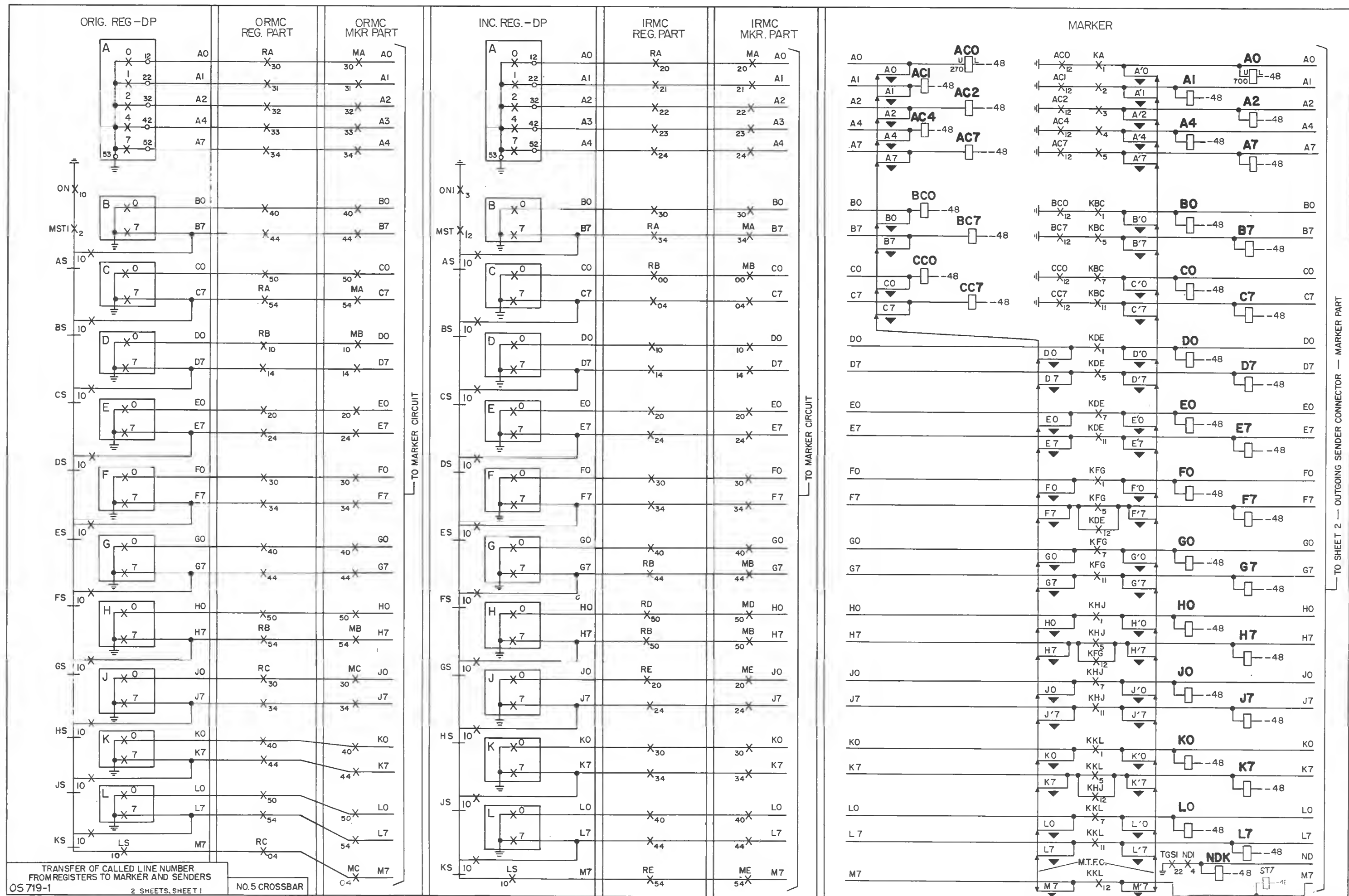


38-Y-4338

ISSUE 1
DATE 4-14-55





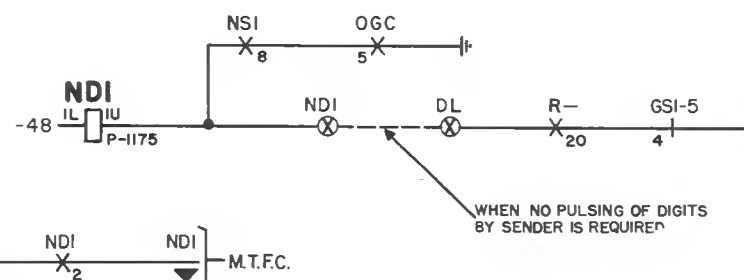
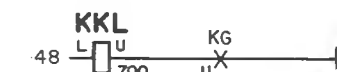
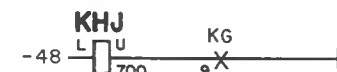
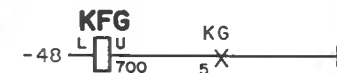
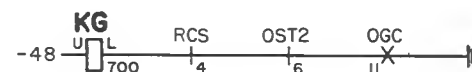
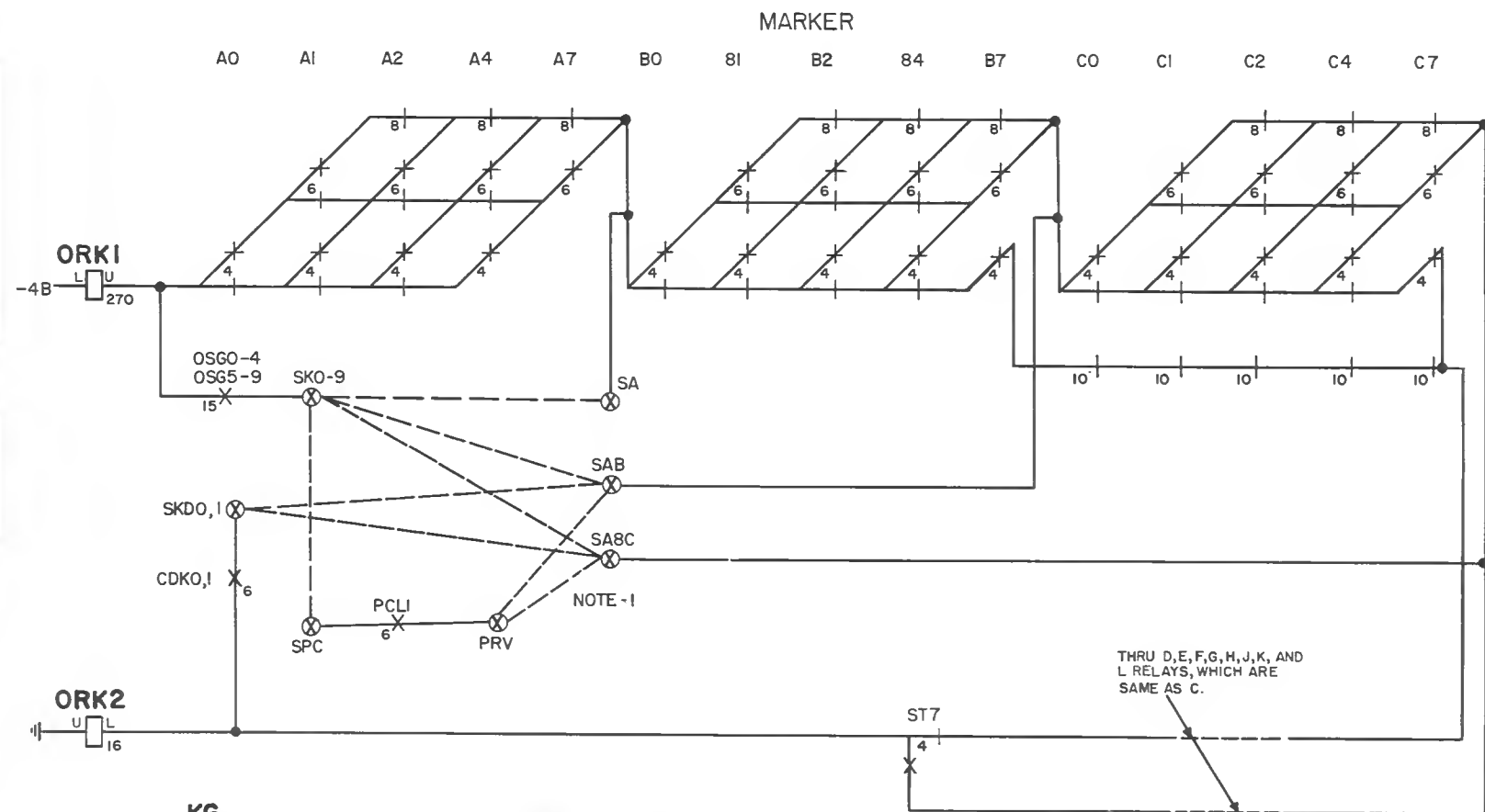
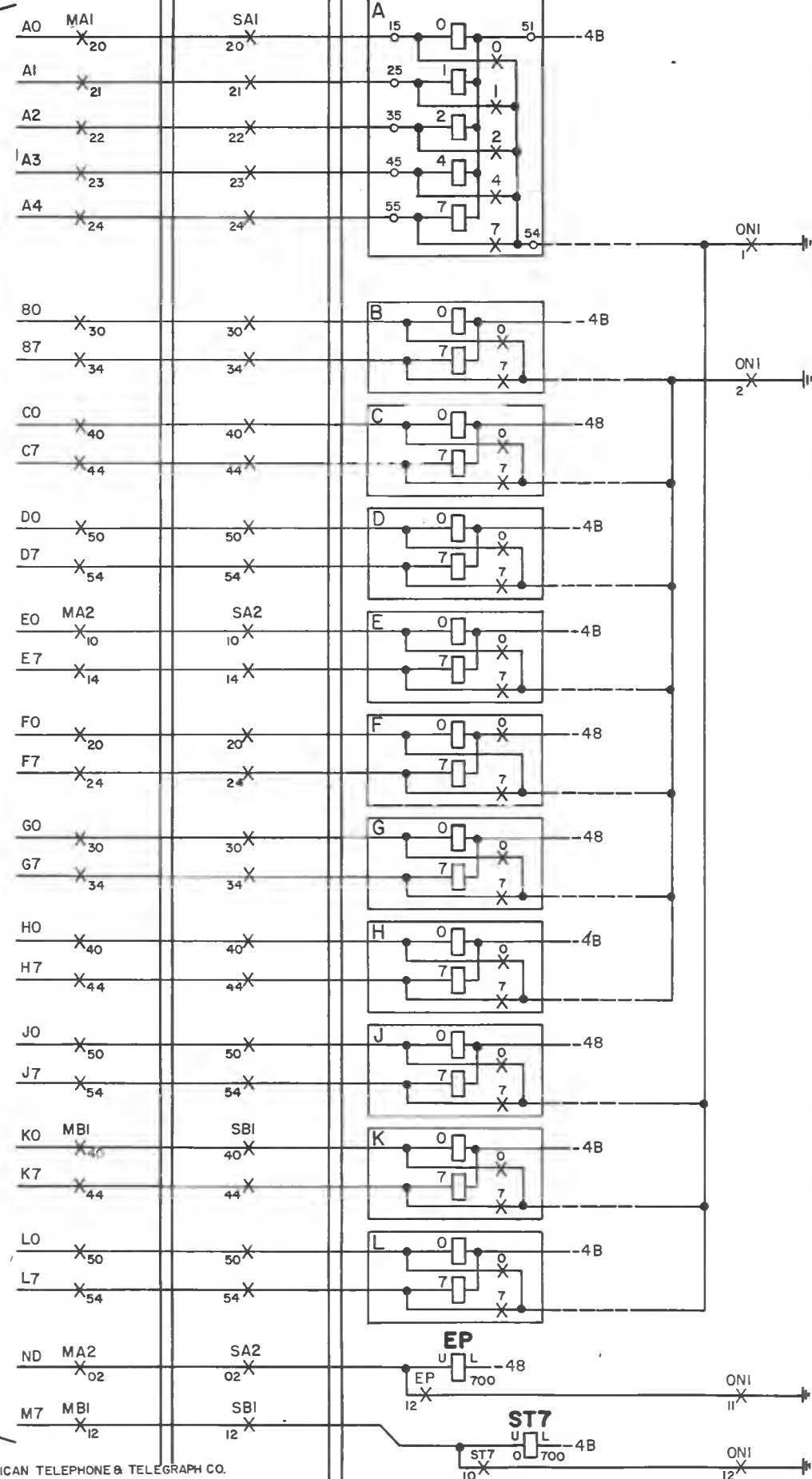


TO SHEET 1 — MARKER CIRCUIT

OSC. MKR. PART

OSC. SDR. PART

OG. SDR. — DP.



NOTE-1

FEATURE OR CONDITION	CONNECT		CONDITION
	FROM	TO	
SKIP, CHECK OF DIGITS INFORMATION TRANSMITTED TO THE OUTGOING SENDER	S K 0-9	SA	SKIP CHECK "A" DIGIT
		SAB	SKIP CHECK "AB" DIGITS
		SABC	SKIP CHECK "ABC" DIGITS
SKIP, CHECK OF DIGITS ON ON REVERTIVE SENDER GROUPS USED WITH PULSE CONVERSION	S K 0-9	SPC	REVERTIVE SENDER GROUPS USED WITH PULSE CONVERSION
		PRV	REV. SENDERS EQUIPPED TWO DIGIT OFFICE CODES
		SABC	REV. SENDERS EQUIPPED FOR THREE DIGIT OFFICE CODES

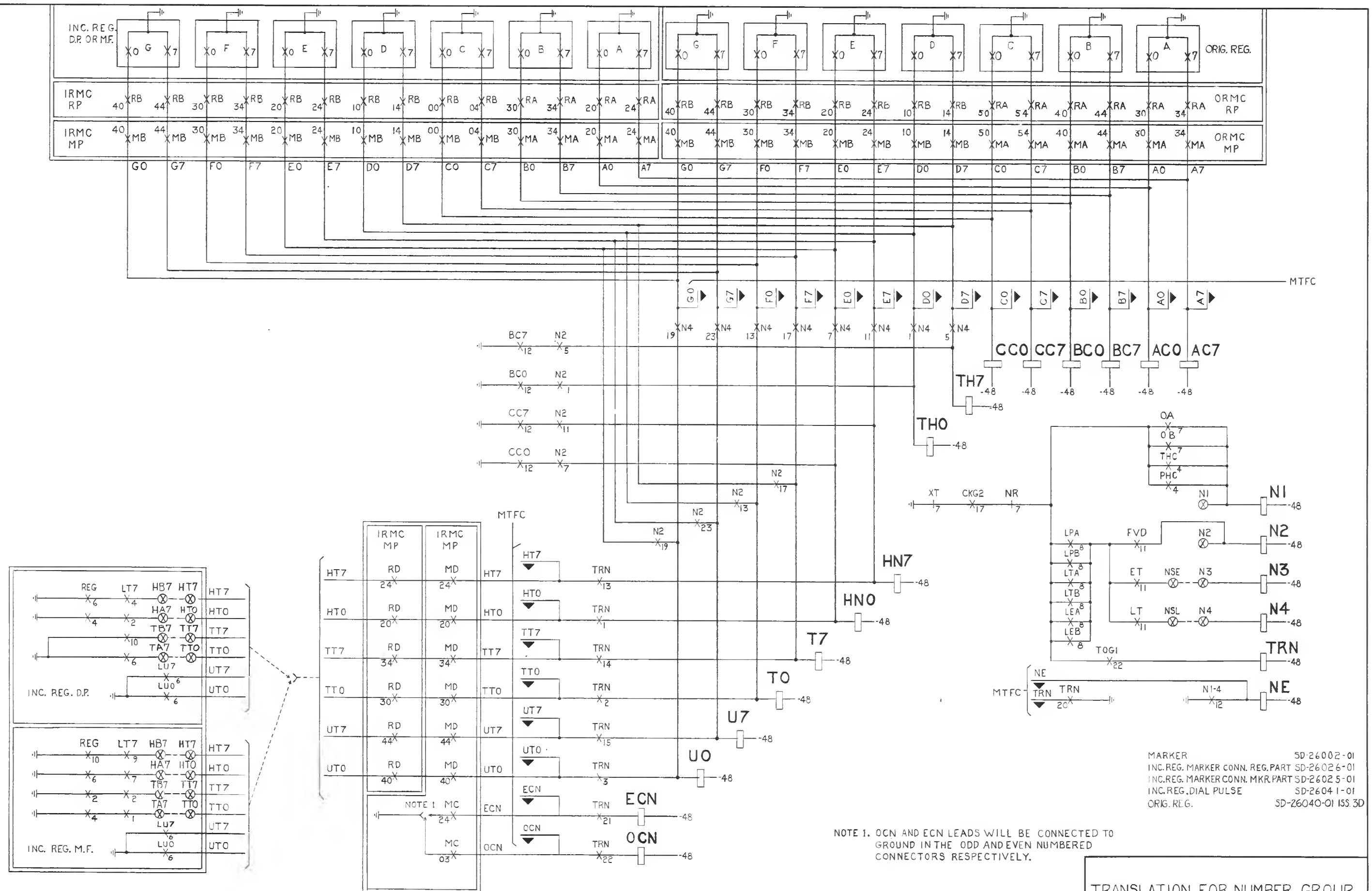
ORIG. REG. SD-26040-01 ISS. 3D
 INC. REG. — DIAL PULSING SD-26041-01 ISS. 3D
 ORIG. REG. MKR. CONN. — MKR. PART SD-26023-01 ISS. 3D
 ORIG. REG. MKR. CONN. — REG. PART SD-26024-01 ISS. 4D
 INC. REG. MKR. CONN. — MKR. PART SD-26025-01 ISS. 2D
 INC. REG. MKR. CONN. — SDR. PART SD-26026-01 ISS. 4D
 OG. SENDER CONN. — SDR. PART SD-26057-01 ISS. 1
 OG. SENDER CONN. — MKR. PART SD-26059-01 ISS. 1
 OG. SENDER DIAL PULSING SD-26050-01 ISS. 1

 TRANSFER OF CALLED LINE NUMBERS
 FROM REGISTER TO MARKER TO SENDERS

NO.5 CROSSBAR

OS 719-1

2 SHEETS, SHEET 2

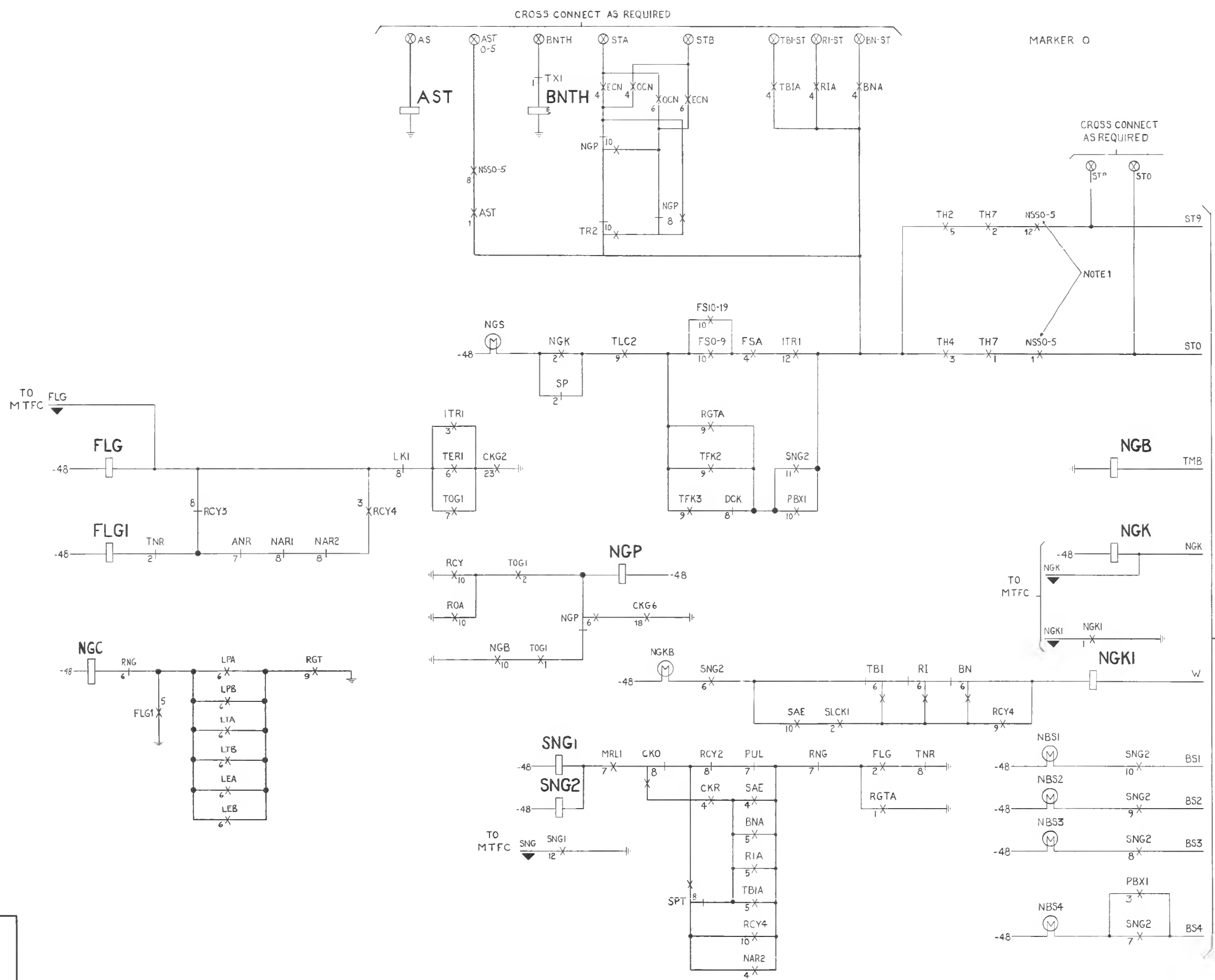


NOTE 1. OCN AND ECN LEADS WILL BE CONNECTED TO GROUND IN THE ODD AND EVEN NUMBERED CONNECTORS RESPECTIVELY.

TRANSLATION FOR NUMBER GROUP
SELECTION
50R7 DIGITS AND ARRANGED FOR TANDEM
AND TOLL
OS 720-1

NO 5 CROSSBAR

NOTE 1
FOR OPERATION OF NSS-RELAYS
SEE FS-81, SD 26002



PREFERENCE CONTROL < MB CKT
NUMBER GROUP CONN. CKT
COMPLETING MARKER CKT

SD 26039-01 ISS 2D
SD 26035-01 ISS 2A
SD 26002-01 ISS 1

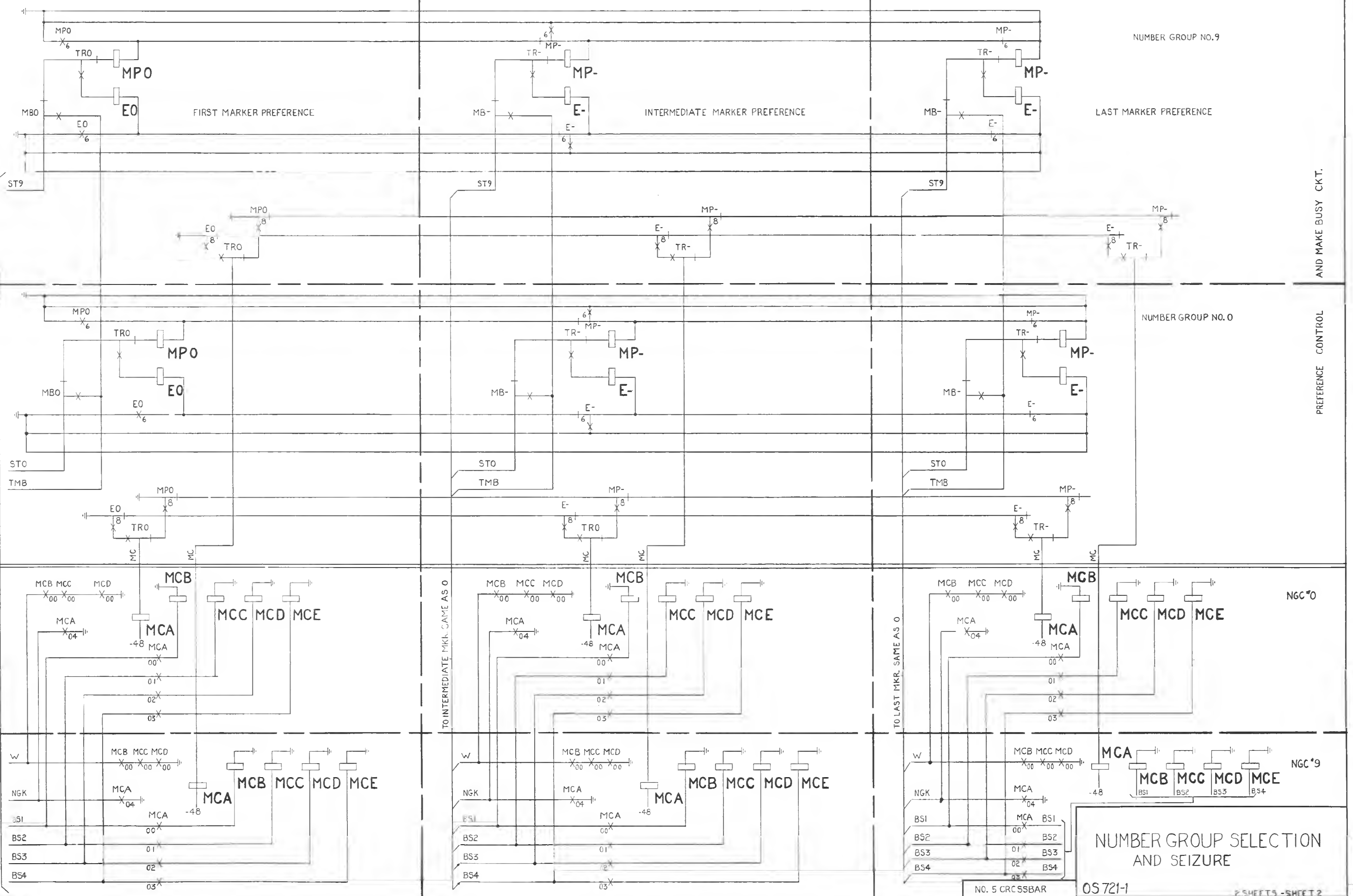
NUMBER GROUP SELECTION AND SEIZURE

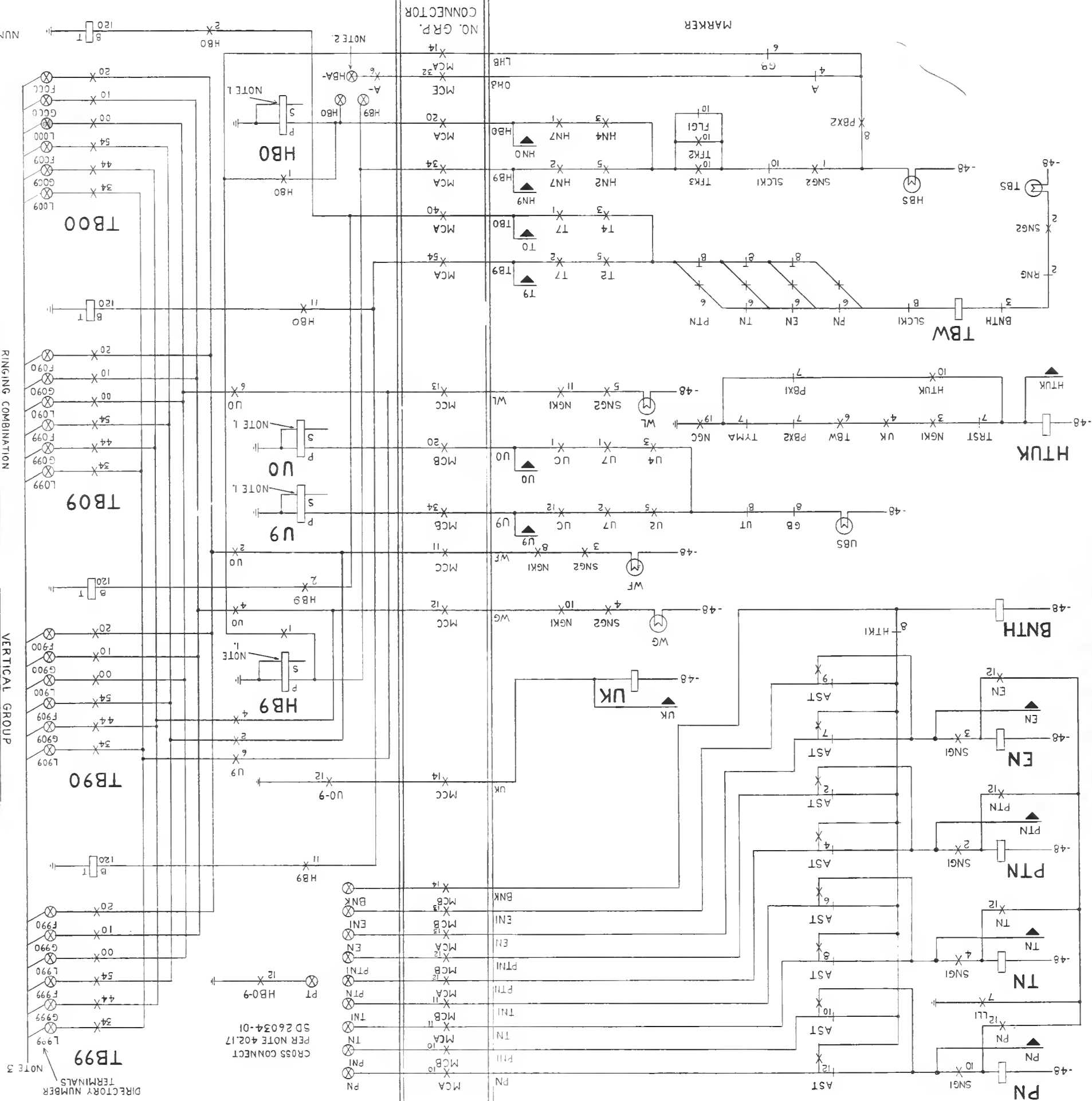
TO SHEET
NO. 2
FOR FIRST
NO. GRP.
CONN.

ISSUE	1	W/L
DATE	4-16-55	

ISSUE	1	W/L
DATE	4-16-55	

TO MARKER O SHEET 1





NUMBER GROUP CKT.

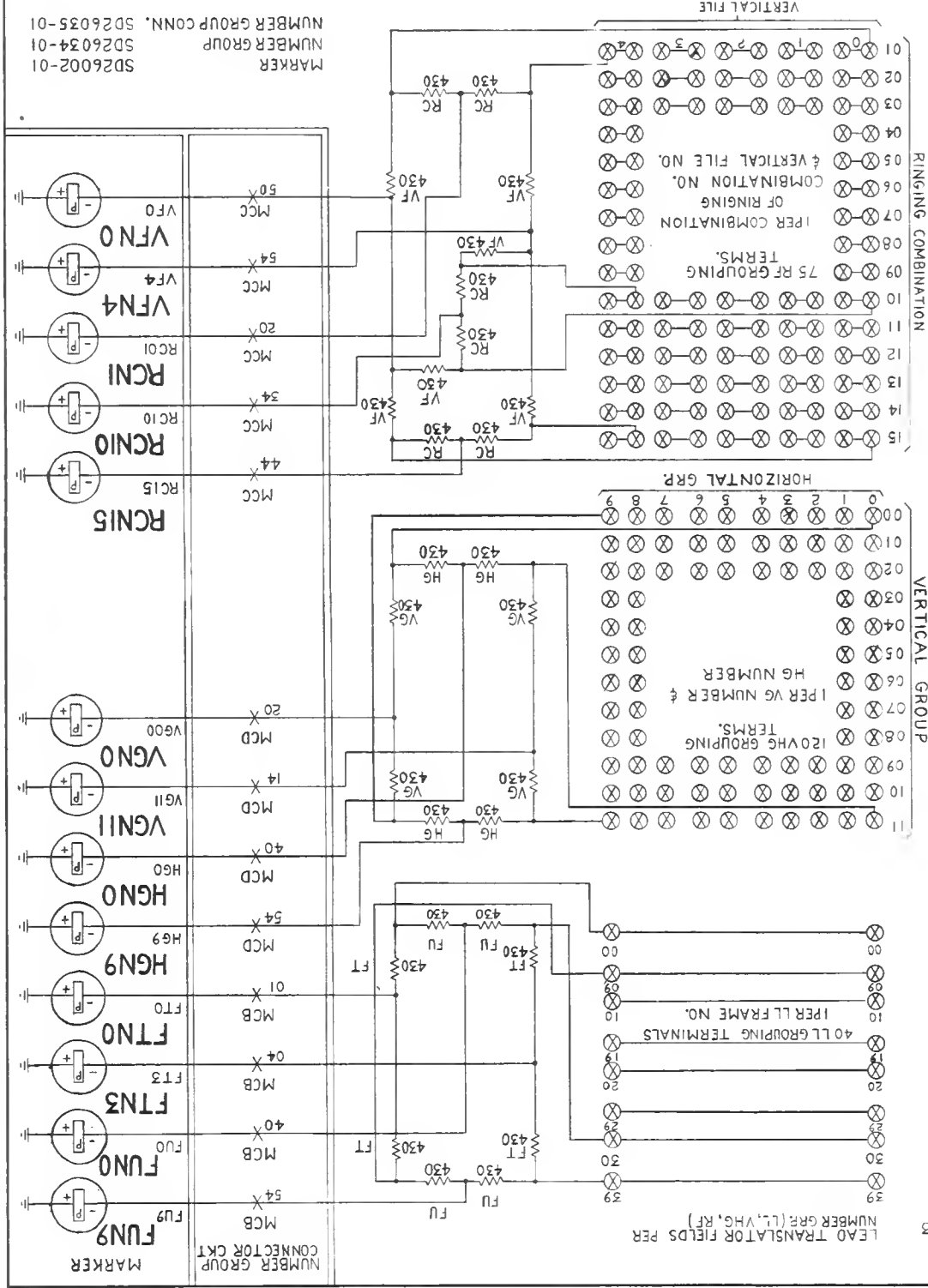
NO. 5 CROSSBAR

OS 722-1

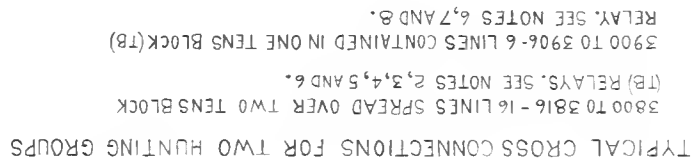
NUMBER GROUP TRANSLATION
COMPLETING MARKER

- NOTE 1. IF PRIMARY WINDING OF (HB) OR (U) RELAY BECOMES OPEN, THE SECONDARY SHOULD BE SUBSTITUTED
2. SEE FS102, 104 OF SD26034-01 FOR HBA TO HB-CROSS-CONNECTION
3. L--- PCHG. X-CONN. TO LL FIELD, G--- PCHG. X-CONN. TO VH6 FIELD, F--- PCHG. X-CONN. TO RF FIELD.

MARKER
NUMBER GROUP
SD26034-01
SD26035-01



AMERICAN TELEPHONE & TELEGRAPH CO.



MDF



N.O.5 CROSSBAR

05723-1

TERMINAL HUNTING

LINE, LINE LINK & MARKER CONN. CONTROL

NOTE1 SPARE WINDING ON HB-4-U-RELAYS CAN BE USED IF OTHER WINDING GOES OPEN.
NOTE2 CONNECT HB-TO HBA- WHEN A HUNTING GROUP IS SPREAD OVER TWO OR MORE TENS BLOCKS.
NOTE3 WHEN 3800 IS THE FIRST LINE OF THE HUNT GROUP AND SC00 IS ASSIGNED FOR FIRST TEN LINES.
NOTE4 WHEN THE HUNT GROUP GOES INTO NEXT TENS BLOCK, THIS WILL ALLOW THE AO(ADVANCE RELAY O) TO OPERATE.
NOTE5 SC01 IS ASSIGNED TO SECOND TENS BLOCK FOR LAST SIX LINES OF HUNT GROUP.
WHEN AO RELAY OPERATES THIS CROSS-CONNECTION WILL SERVE AS A PATH TO OPERATE SC01 RELAY.
NOTE6 TO SHOW END OF GROUP INDICATION TO THE MARKER.
NOTE7 WHEN 3900 IS THE FIRST LINE OF THE HUNT GROUP AND SC13 IS ASSIGNED.
NOTE8 TO SHOW OVERFLOW INDICATION TO MARKER.
NOTE9 THE HUNDREDS & TENS DIGIT OF THE 'NS PUNCHING REPRESENTS THE SC RELAY NUMBER AND THE UNITS DIGIT REPRESENTS THE UNITS OF THE TB RELAY.

TERMINAL HUNTING

05723-1

4 SHEETS, SHEET 1

NO. 5 CROSSBAR

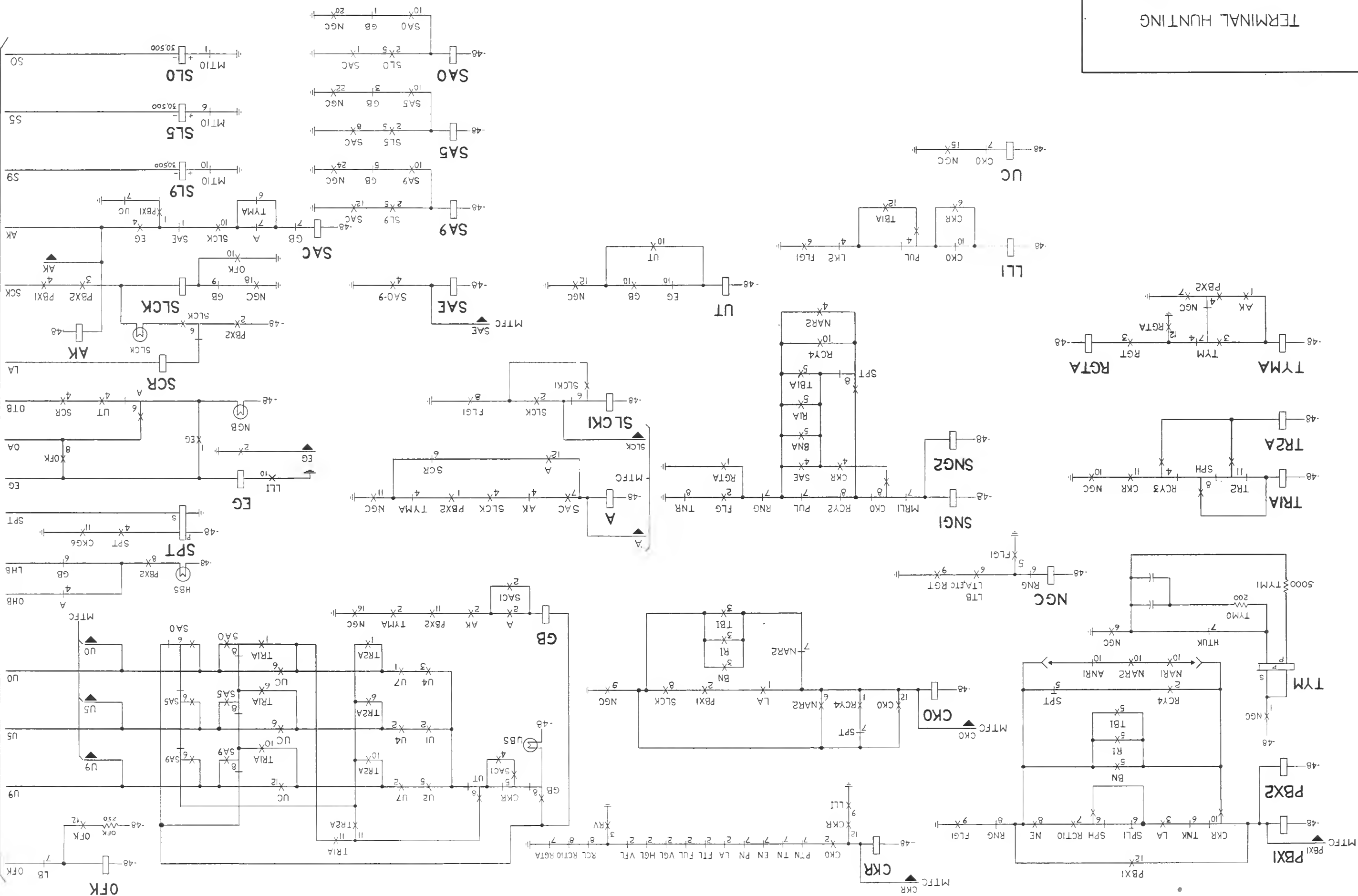
AMERICAN TELEPHONE & TELEGRAPH CO.

38-Y-4339

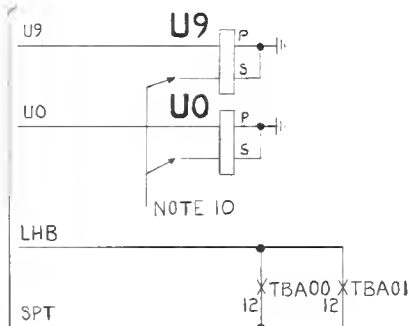
4 SHEETS, SHEET 1

ISSUE	1	W.L.							
DATE	7-17-55								

TO SHEET 2



TO SHEET 2



TYPICAL CROSS CONNECTIONS FOR TWO HUNTING GROUPS IN ONE TENS BLOCK

8700 TO 8701 ASSIGNED TO SC00 WITH TBA00

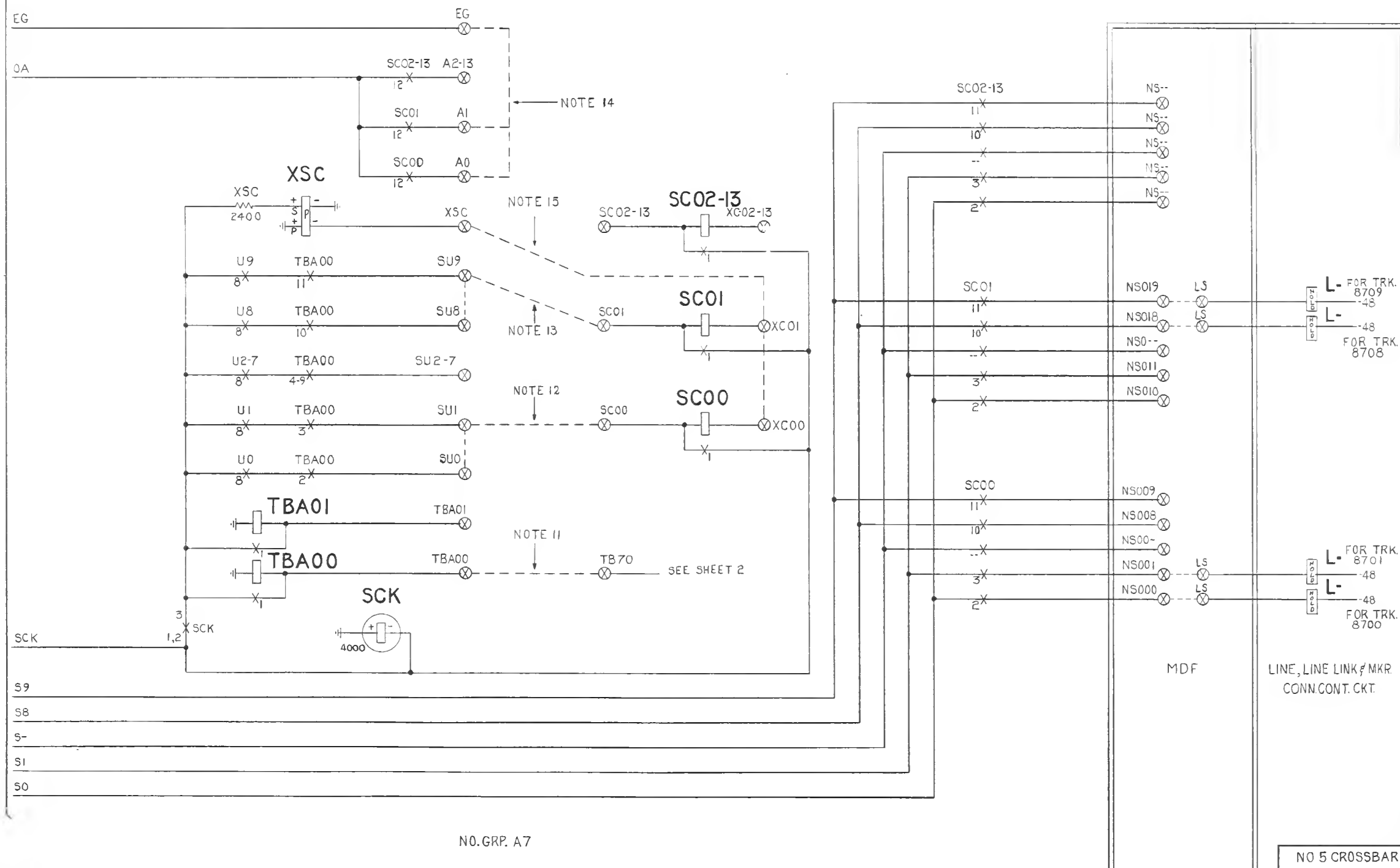
8708 TO 8709 ASSIGNED TO SC01 WITH TBA01

NOTE-10. SPARE WINDINGS OF U-RELAYS CAN BE USED
IF OTHER WINDING GOES OPEN.NOTE-11. USED TO OPERATE TBA-- RELAY FOR BOTH
HUNT GRPS.

NOTE-12. TO OPERATE SC00 ASSIGNED TO 8700 GRP.

NOTE-13. TO OPERATE SC01 ASSIGNED TO 8708 GRP.

NOTE-14. TO SHOW END OF GRP. INDICATION TO MARKER.

NOTE-15. TO DETECT TWO OR MORE SC RELAYS OPERATED
AT SAME TIME.

TERMINAL HUNTING

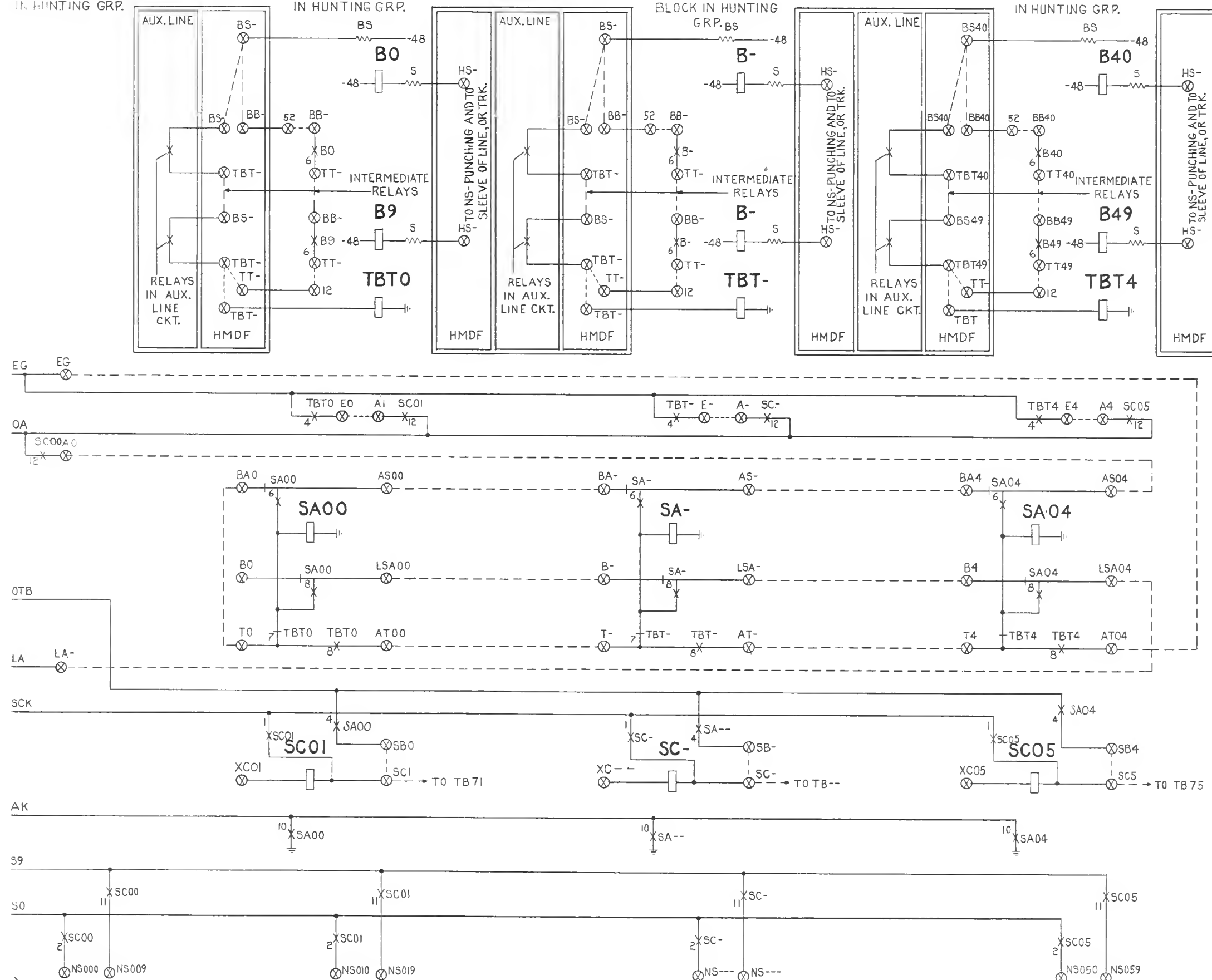
NO 5 CROSSBAR

OS 723-1

4 SHEETS, SHEET 3

1ST. TENS BLOCK
IN HUNTING GRP.2ND. TENS BLOCK
IN HUNTING GRP.INTERMEDIATE TENS
BLOCK IN HUNTING
GRP. BSLAST TENS BLOCK
IN HUNTING GRP.TYPICAL CROSS CONNECTIONS FOR ONE HUNTING
GRP. SPREAD OVER SIX TENS BLOCKS. WITH
BLOCK SELECT FEATURE. 8700 TO 8759

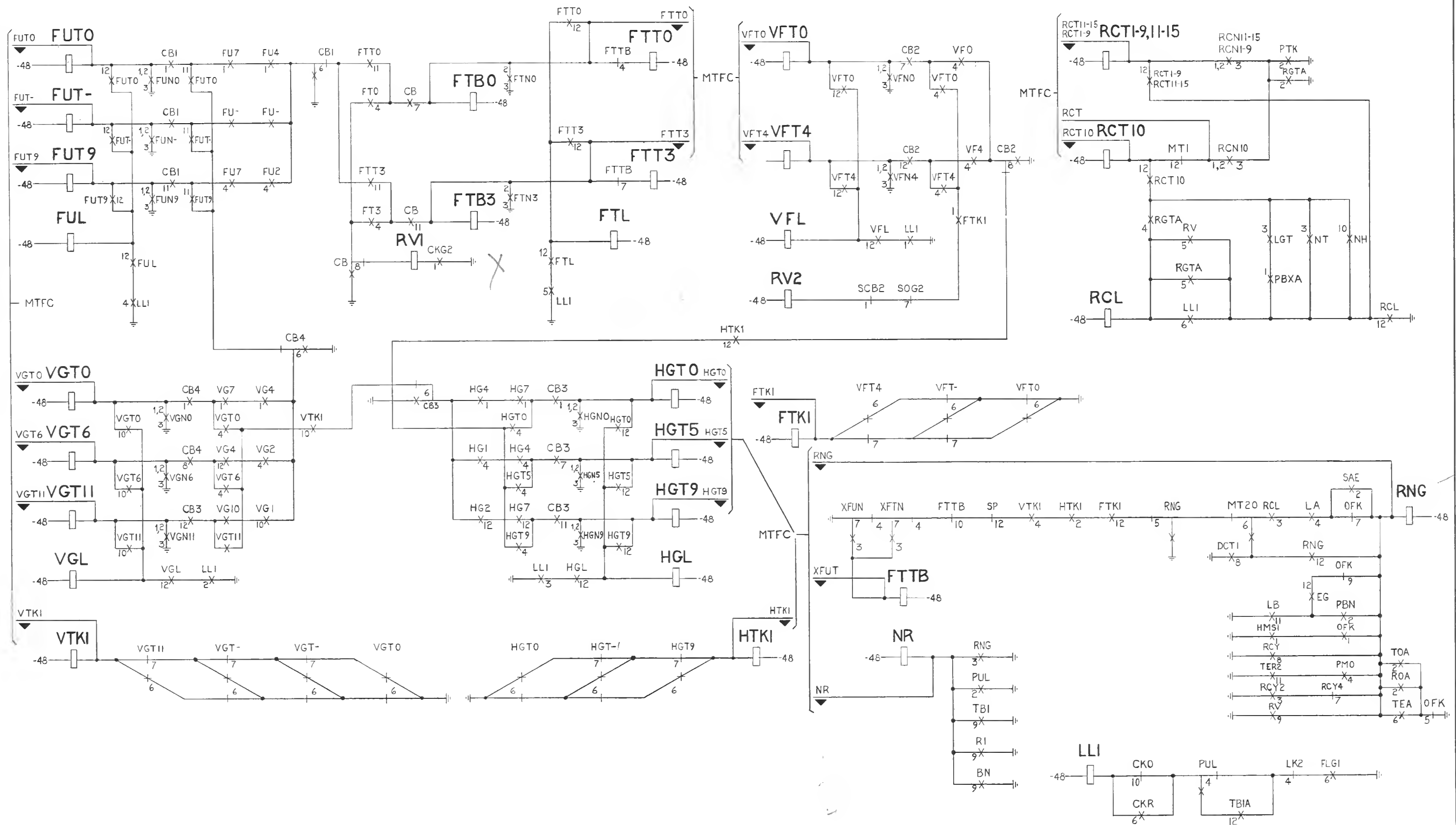
8700-8709 - SC00
 8710-8719 - SC01 - TBT0 - SA00
 8720-8729 - SC02 - TBT1 - SA01
 8730-8739 - SC03 - TBT2 - SA02
 8740-8749 - SC04 - TBT3 - SA03
 8750-8759 - SC05 - TBT4 - SA04

TO LINE HOLD MAGNETS, OR AUX.
LINE OR TRUNK CKTS.

NO 5 CROSSBAR

OS 723-1

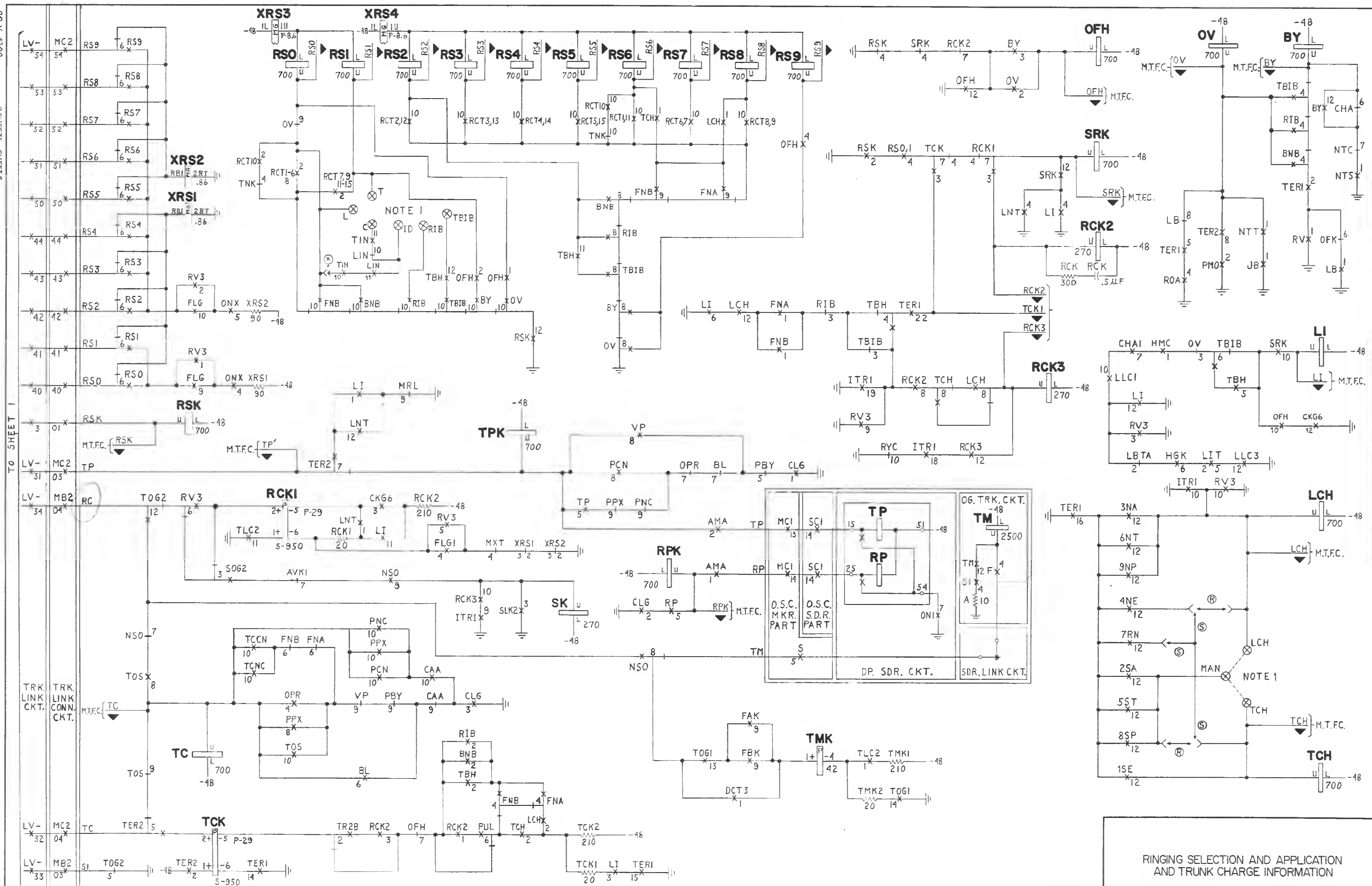
4 SHEETS, SHEET 4



LINE LINK LOCATION CONTROL AND
NUMBER GROUP RELEASE

ISSUE	1	K.K.			
DATE	4-16-55				

TO SHEET



RINGING SELECTION AND APPLICATION AND TRUNK CHARGE INFORMATION

NO.5 CROSSBAR

OS 725-1

FIG.1

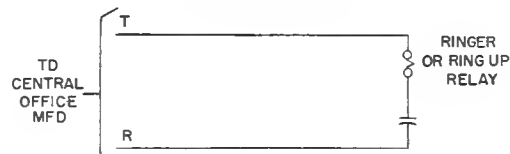
INDIVIDUAL PARTY
OR REGULAR PBX LINE

FIG.2

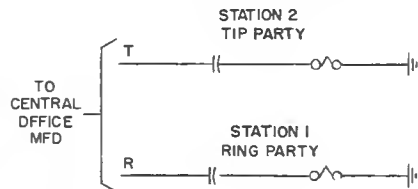
2-PARTY LINE FLAT RATE
(FULL SELECTIVE)

FIG.5

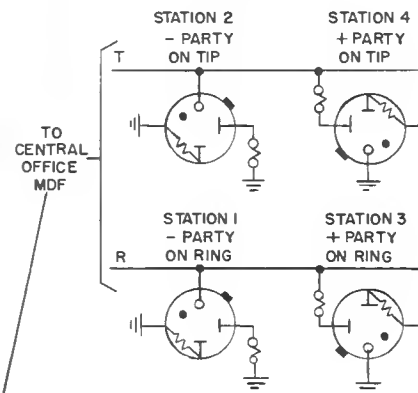
4-PARTY LINE
(FULL SELECTIVE)
TUBE SUB. SET

FIG.7

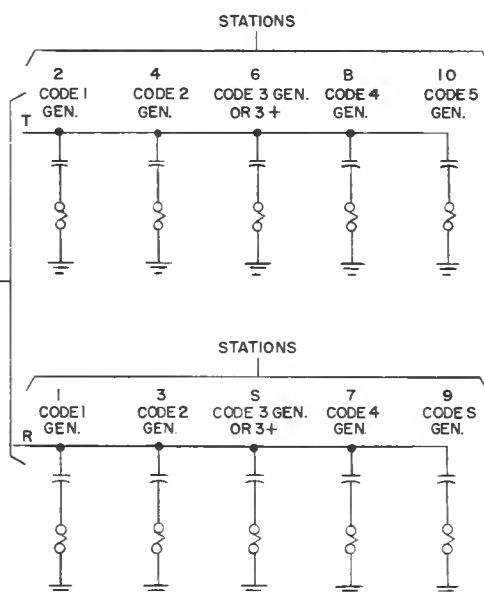
10 PARTY LINE
(S CODE)
SEE NOTE S

FIG.3

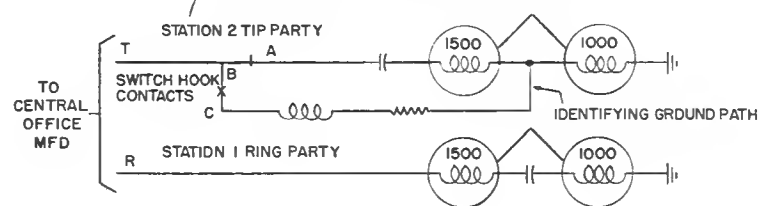
2-PARTY MESSAGE RATE, 2 PARTY FLAT RATE A.M.A.
(FULL SELECTIVE) SOO C OR D TYPE SET

FIG.6

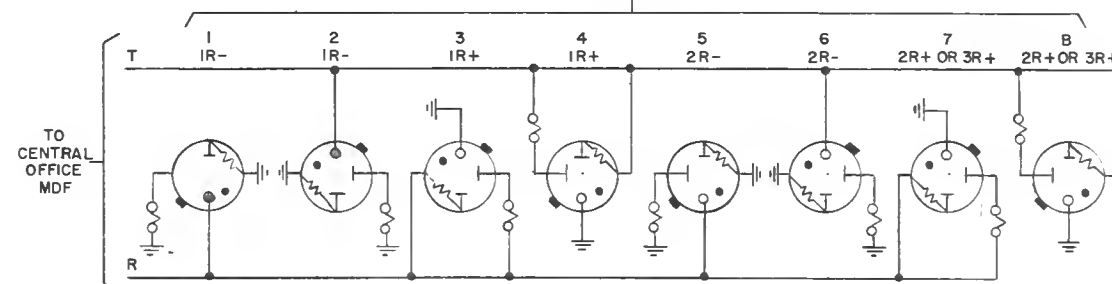
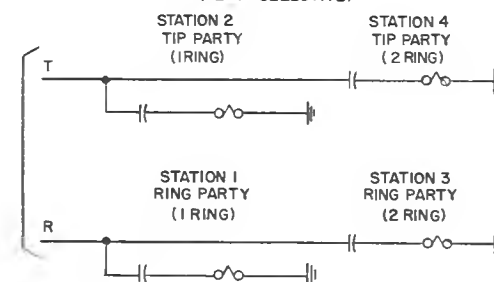
B-PARTY LINE
(SEMI-SELECTIVE) TUBE SUB. SET
STATIONS

FIG.4

4-PARTY LINE
(SEMI-SELECTIVE)

NOTES:

FEATURE OR CONDITION	CONNECT		CONDITION
	FROM	TO	
WHEN MANUAL INCOMING TRUNKS MAY HAVE CHARGE OR NON-CHARGE SUPV. (A & M)	MAN	LCH	NON-CHARGE SUPV.
	MAN	TCH	CHARGE SUPV.
	TBIB	T	COMMON GRPS. FOR REGULAR AND TROUBLE INTERCEPT
	RIB	L	
	TBIB	ID	SEPARATE TRUNK GROUPS
	RIB	L	
WHEN SUPV. IS FIXED BY INCOMING TRUNK CLASS RELAYS	C	T	RINGING DISTINCTION
	C	L	NO RINGING DISTINCTION
	MAN	TCH	
	TBIB	L	SEPARATE TRUNK GROUPS
	RIB	L	
	TBIB	T	COMMON TRUNK GROUP FOR REGULAR AND TROUBLE INTERCEPT
	RIB	L	

2.

MACHINE RINGING CODE	ONE CYCLE = 6 SECONDS AT 1200 R.P.M. OF RINGING MACHINE						
	0	1	2	3	4	5	6
CODE 1 GEN. BR1							
CODE 1 GEN. BR2							
CODE 1 GEN. BR3							
CODE 1 +							
CODE 2 GEN.							
CODE 2 +							
CODE 3 GEN.							
CODE 3 +							
CODE 4 GEN.							
CODE 5 GEN.							
PICK UP							
REVERTIVE RINGING							

1 SECONDO

3.

RINGING COMBINATIONS	PARTIES	NUMBER OF RINGS	RINGING CODES *	RINGING POLARITY
D1 B11	10P-5 CODE	ONE	CODE 1 GEN.	-
02 B12		TWO	CODE 2 GEN.	-
03 B13		ONE LONG & ONE SHORT	CODE 3 GEN. **	-
04 B14		ONE LONG & TWO SHORT	CODE 4 GEN.	-
05 B15	BSS	TWO LONG & ONE SHORT	CODE 5 GEN.	-
03 B13		ONE LONG & ONE SHORT	CODE 3+ **	+
02 B12		TWO	CODE 2 GEN.	-
03 B13		TWO	CODE 2+ **	+
01 B11	4SS	ONE	CODE 1 GEN.	-
06 B07		ONE	CODE 1 +	+
03 B13		ONE LONG & ONE SHORT	CODE 3+ **	+
01 B11		ONE	CODE 1 GEN.	-
02 B12	4FS	TWO	CODE 2 GEN.	-
01 B11		ONE	CODE 1 GEN.	-
06 B07		ONE	CODE 1 +	+
01 B11		ONE	CODE 1 GEN.	-
01 B11	2 SEL.	ONE	CODE 1 GEN.	-
01 OR 11	1 SEL.	ONE	CODE 1 GEN.	-

* THESE CODES ARE APPLIED TO THE TIP OR RING OF THE TRUNK IN ACCORDANCE WITH NOTE 4.

** WHERE BOTH EIGHT PARTY SEMI-SELECTIVE AND TEN PARTY FIVE CODE LINES ARE SERVED BY THE SAME MARKER GROUP, CODE 3+ REPLACES CODE 2+ FOR THE EIGHT PARTY LINES AND CODE 3 GEN. FOR THE TEN PARTY LINES.

4.

RINGING COMBINATIONS	RELAYS OPERATED IN MARKER CKT.	SEL. MAGS. OPERATED IN RINGING SEL. SWITCH CKT.	RINGING CURRENT TO TRUNK LEADS	
			T	R
01	RCT1,RS0,RS6	0,6	RINGING GRD.	CODE 1 GEN.
02	RCT2,RS0,RS2	0,2		CODE 2 GEN. OR SUP.-AUD. OR AC-DC AUD.
03	RCT3,RS0,RS3	0,3		CODE 3 GEN. OR 2+ OR 3+
04	RCT4,RS0,RS4	0,4		CODE 4 GEN.
05	RCT5,RS0,RS5	0,5		CODE 5 GEN.
06	RCT6,RS0,RS7	0,7		CODE 1+
D7	RCT7,RS1,RS7	1,7	CODE 1+	RINGING GRD.
** DB	RCTB,RS0,RSB	0,B	RINGING GRD.	CODE 1 GEN.
** 09	RCT9,RS1,RSB	1,B	CODE 1 GEN.	RINGING GRD.
* 10	RCT10,RS0,RS6	0,6	RINGING GRD.	CODE 1 GEN.
11	RCT11,RS1,RS6	1,6	CODE 1 GEN.	RINGING GRD.
12	RCT12,RS1,RS2	1,2	CODE 2 GEN. OR SUP.-AUD. OR AC-DC AUD.	
13	RCT13,RS1,RS3	1,3	CODE 3 GEN. OR 2+ OR 3+	
14	RCT14,RS1,RS4	1,4	CODE 4 GEN.	
15	RCT15,RS1,RS5	1,5	CODE 5 GEN.	
TBIB (TOLL)	TBIB,RS1,RS2	1,2 SEE NOTE 1	CODE 2 GEN. OR SUP.-AUD. OR AC-DC AUD.	CODE 2 GEN. OR SUP.-AUD. OR AC-DC AUD.
TBIB (LOCAL)	TBIB,RS0,RS2	0,2	RINGING GRD.	
RIB (TOLL)	RIB,RS1,RS2	1,2 SEE NOTE 1	CODE 2 GEN. OR SUP.-AUD. OR AC-DC AUD.	RINGING GRD.
RIB (LOCAL)	RIB,RS0,RS2	0,2	RINGING GRD.	CODE 2 GEN. OR SUP.-AUD. OR AC-DC AUD.
BNB	BNB,RS0,RS2	0,2		CODE 1 GEN.
** FNB	FNB,RS0,RS6 OR B	0,6 OR B		
			INFORMATION OVER TRK. LEADS	
			T N	F L
BY (INC. TRK.)	BY,RS1,RS9	1,9	60 IPM (BUSY TONE)	60 IPM (GND)
OV (INC. TRK.)	OV,RS0,RS9	0,9	120 IPM (OVERFLOW TONE)	120 IPM (GND)

** USED FOR TERMINAL HUNTING GROUPS AND TRUNK NO. LOCATION.
*** RCOB AND 09 WILL BE RESTRICTED TO USE WITH FREE NUMBERS.
*** FNB RELAY IN MARKER USED ONLY ON TERMINAL HUNTING LINES.
WITH TCH RELAY OPERATED RSO AND RS6 WILL OPERATE.
WITH LCH RELAY OPERATED RSO AND RS6 WILL OPERATE.

* USED FOR TERMINAL HUNTING GROUPS AND TRUNK NO. LOCATION.
 ** RCOB AND 09 WILL BE RESTRICTED TO USE WITH FREE NUMBERS.
 *** FNB RELAY IN MARKER USED ONLY ON TERMINAL HUNTING LINES.
 WITH TCH RELAY OPERATED RSO AND RS6 WILL OPERATE.
 WITH LCH RELAY OPERATED RSO AND RSB WILL OPERATE.

S. UNDER SAME CONDITIONS, 5 RINGERS, EACH IN SERIES WITH CAPACITOR, ARE BRIDGED ACROSS THE LINE TO PROVIDE 5 PARTY SERVICE.

OPTIONS-

	FEATURE OR OPTION		CONDITION	WIRING
			YES (A&M)	R
PARTY LINES SERVED	INTERCEPT DISCRIMINATION BETWEEN LOCAL AND TOLL INC. CALLS		NO (STD)	S
	RINGING SELECTION SWITCH			WIRING
	IND. ONLY OR IND. AND 2 PTY. ONLY			Z
	IND., 2 AND 4 PTY. SEMI-SEL. ONLY			Y
	IND., 2 AND 4 PTY. SEL. ONLY			Z, X
	10 PTY. 5 CODE *			V
	10 PTY. S CODE WITH 4 PTY. SEL. *			V, X
	B PTY. SEMI-SEL. *			W, X
	10 PTY. 5 CODE AND B PTY. SEMI-SEL. *			T, X

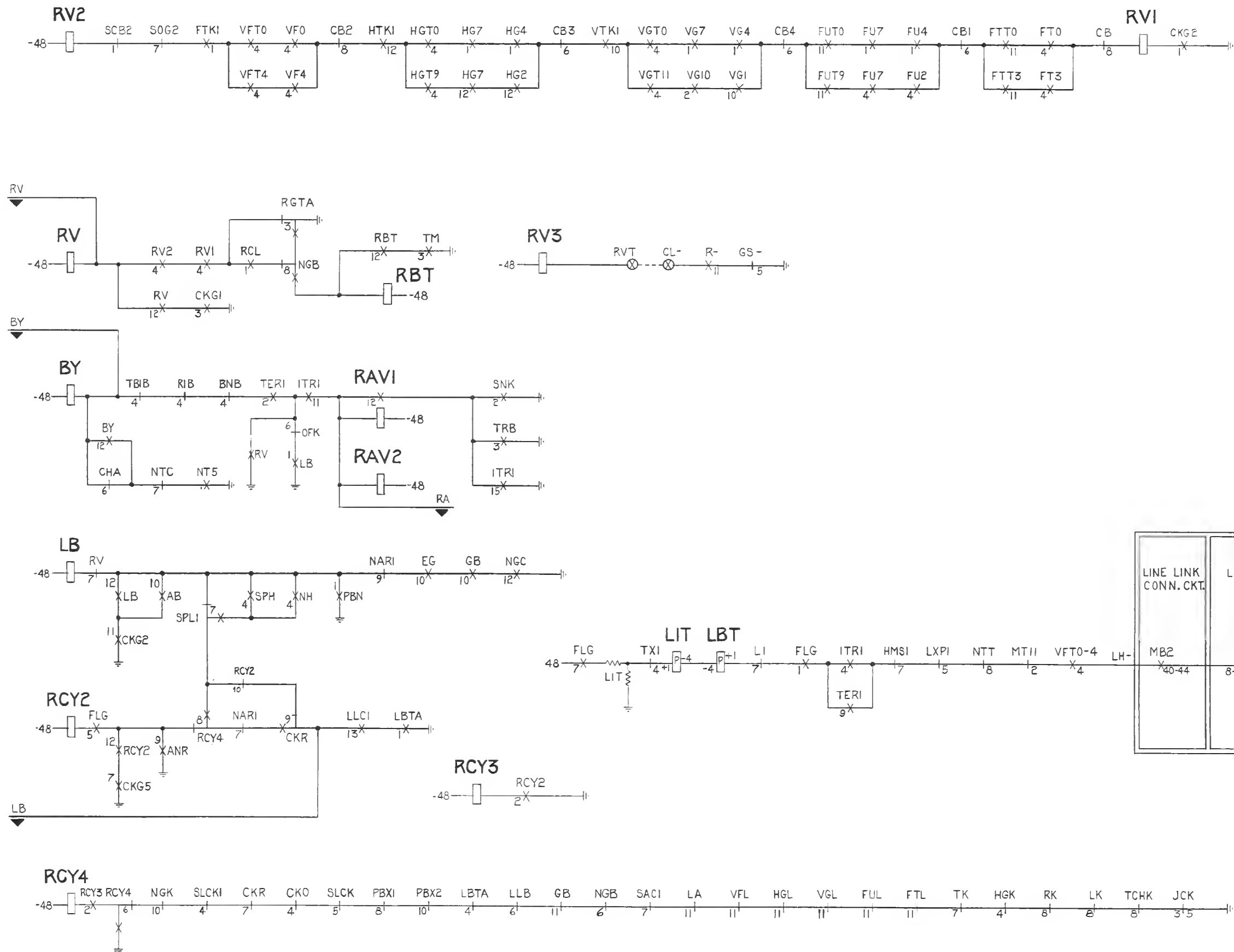
* WHEN RINGING IS PROVIDED FOR TEN PARTY FIVE CODE LINES, THIS RINGING IS ALSO AVAILABLE FOR USE WITH INDIVIDUAL, TWO PARTY & FOUR PARTY SEMI-SELECTIVE LINES. WHEN RINGING IS PROVIDED FOR EIGHT PARTY SEMI-SELECTIVE LINES, THIS RINGING IS ALSO AVAILABLE FOR USE WITH INDIVIDUAL, TWO PARTY, FOUR PARTY SEMI-SELECTIVE AND FOUR PARTY FULL SELECTIVE LINES.

INTRA-OFFICE TRK.
 INC. TRK. BY-LINK
 INC. TRK.
 RINGING SEL. SWITCH-6 WIRE
 OUTGOING TRK.
 MARKER
 SENDER CKT. DIAL PULSING
 OUTGOING SENDER LINK CKT.
 OUTGOING SENDER CONN. CKT.-SDR. PART
 OUTGOING SENDER CONN. CKT.-MKR. PART
 TRK. LINK CKT.
 TRK. LINK CONN. CKT.

SD-26061-01 ISS. 3A
 SD-26077-01 ISS. 2A
 SD-26070-01 ISS. 2D
 SD-26080-01 ISS. 2A
 SD-26085-01 ISS. 6D
 SD-26002-01 ISS. LS
 SD-26050-01 ISS. 1
 SD-25734-01 ISS. 7
 SD-26057-01 ISS. 1
 SD-26059-01 ISS. 1
 SD-26032-01 ISS. 3D
 SD-26033-01 ISS. 3D

RINGING SELECTION AND APPLICATION
 AND TRUNK CHARGE INFORMATION

ISSUE	1	W/L
DATE	4-16-55	

LINE LINK
CONN. CKT.

LINE, LINE LINK AND MARKER CONN. CONTROL CKT.

MB2
X40-44LG-
8-12CROSS POINT
X5

SEE OS-710-2

HOLD
LCOMP. MKR.
LINE, LINE LINK & MKR. CONN. CONT.
LINE LINK CONN.SD 26002-01 ISS 1
SD 26030-01 ISS 2D
SD 26031-01 ISS 2DREVERTING, RINGER TEST AND
BUSY LINE RECOGNITION

NO.5 CROSSBAR

OS726-1

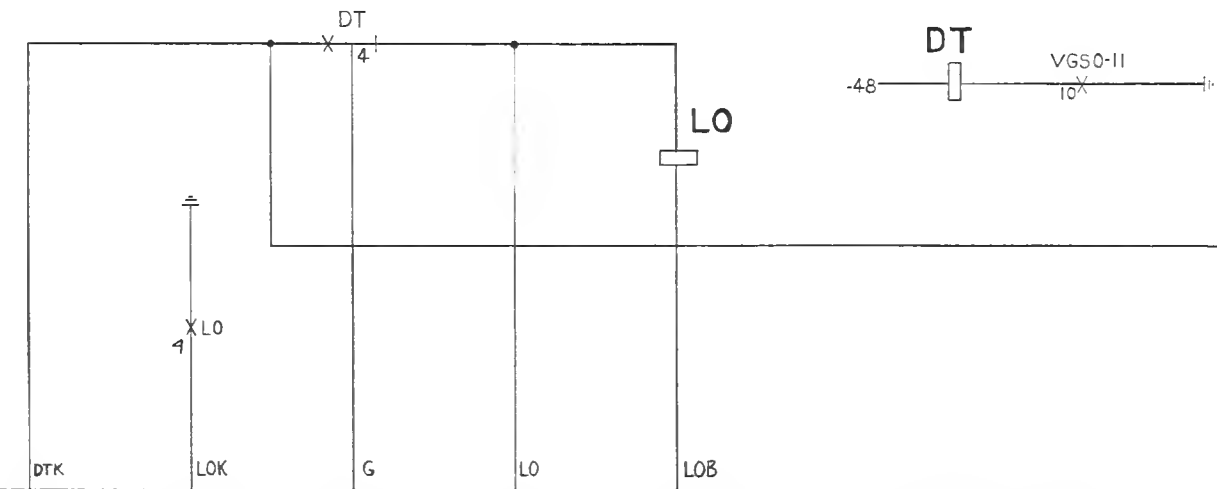


ESTABLISHED CONNECTION
INTRAOFFICE CALL-FLAT RATE

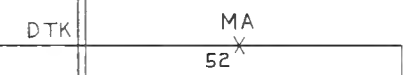
38-Y-4327

ISSUE	1	W/L
DATE	4-16-55	

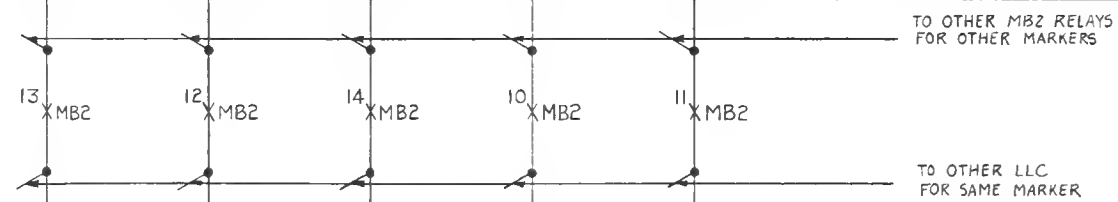
LINE, LINE LINK MARKER CONN.
CONTROL CKT.



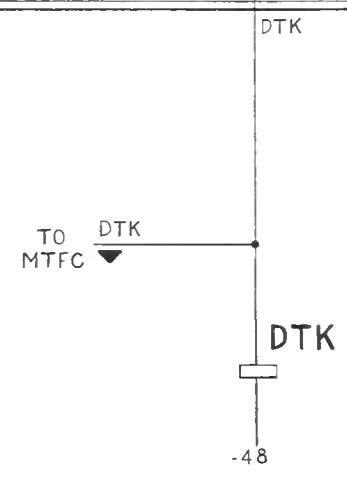
LINE LINK MARKER CONN. CKT.



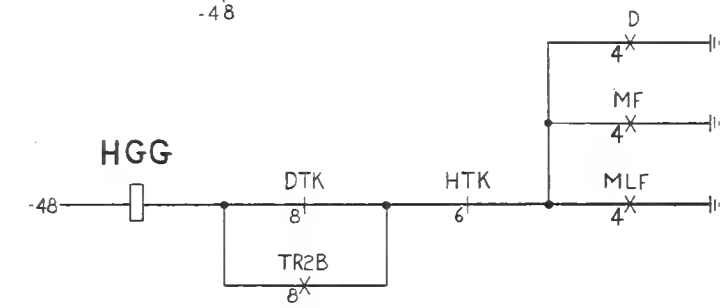
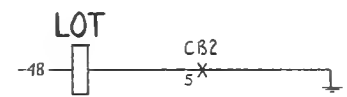
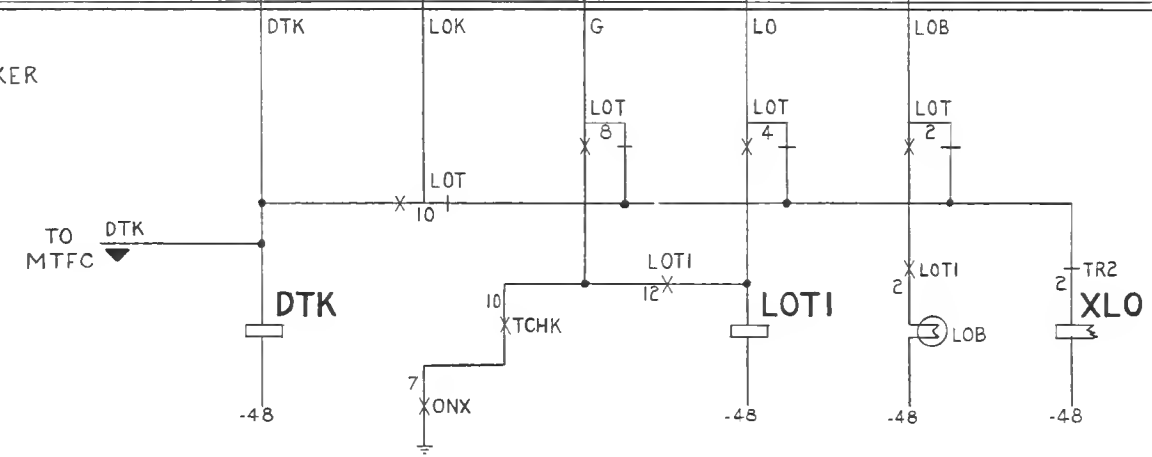
LINE LINK CONNECTOR CKT.



DIAL TONE MARKER



COMP. MARKER

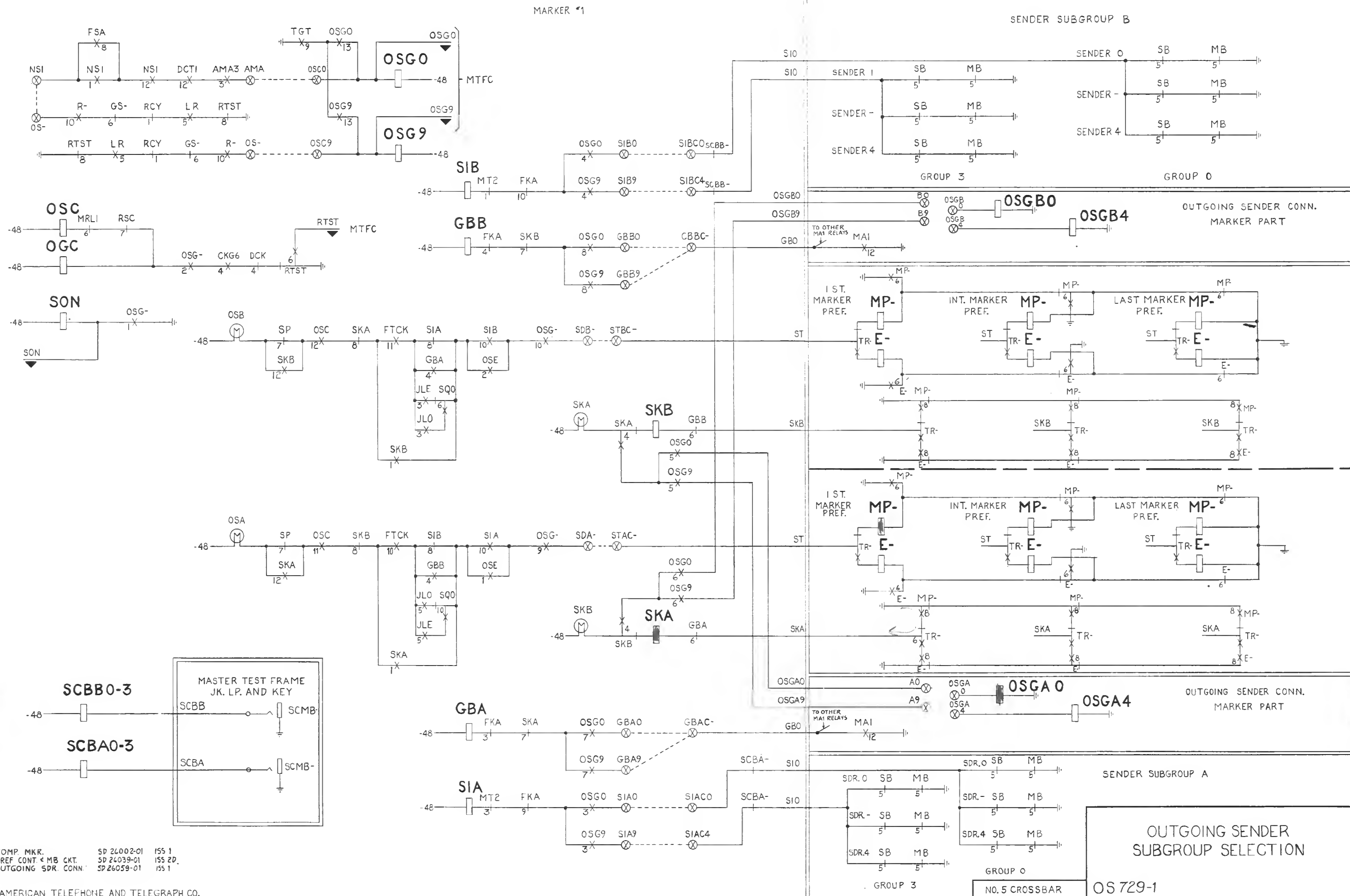


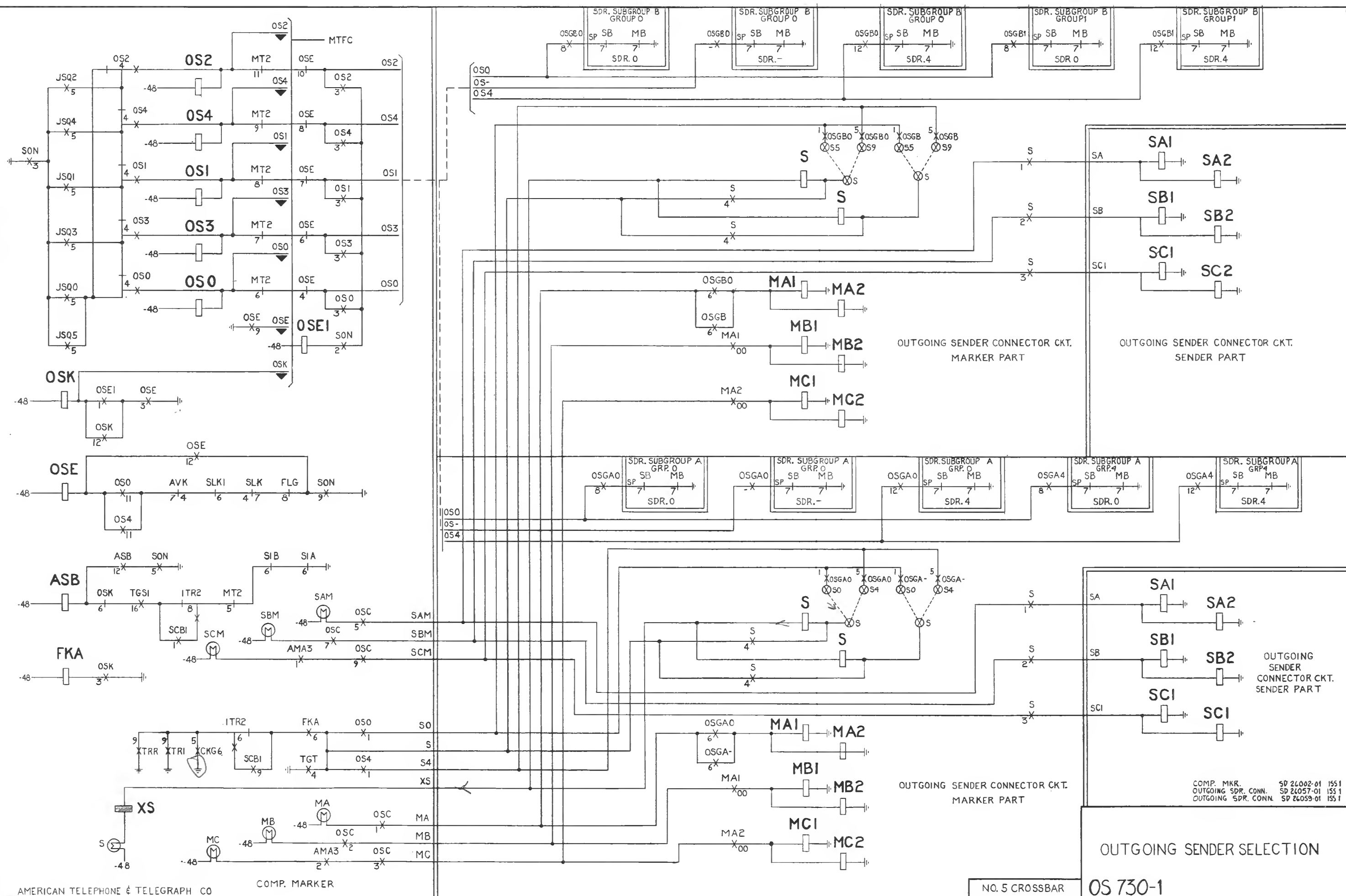
D.T. MARKER	SD-26001-01	ISS 3D
COMP. MARKER	SD-26002-01	ISS 1
L.L.M.C. CONTROL	SD-26030-01	ISS 2D
LLMC	SD-26022-01	ISS 3D
LLC	SD-26031-01	ISS 2D

LINE LINK FRAME LOCKOUT

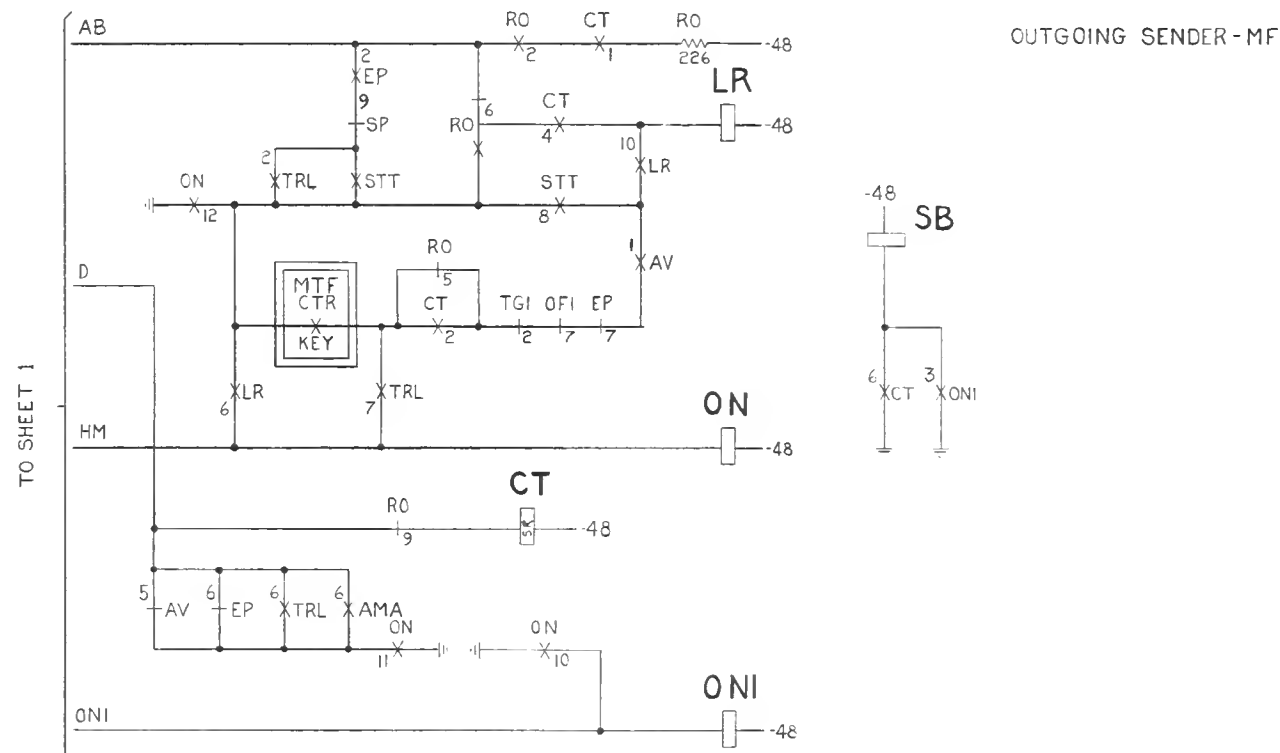
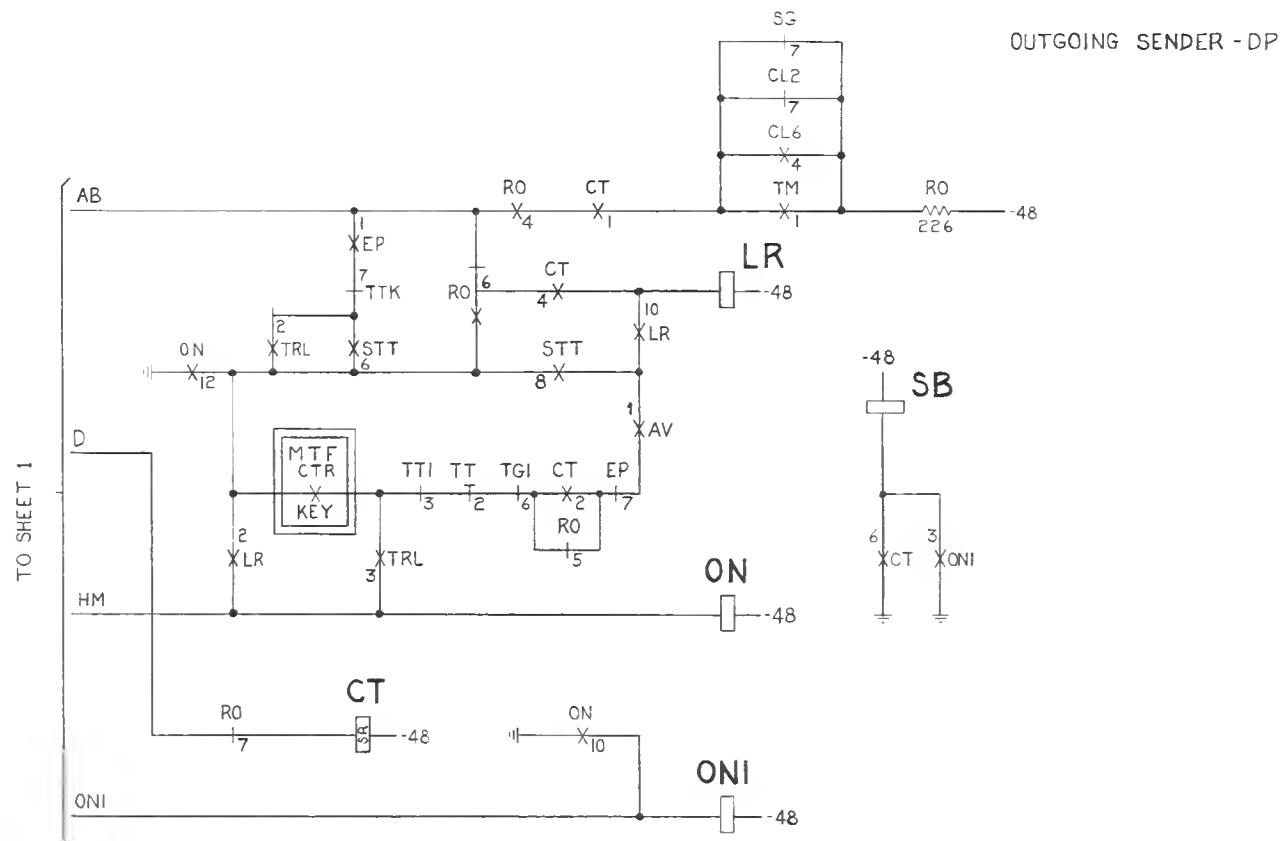
38-X-4330

ISSUE	1	W/L
DATE	4-6-55	





ISSUE	DATE
1	4-19-55
2	
3	
4	
5	
6	
7	
8	
9	
10	



FEATURE OR OPTION	OS- OPTION
DAMPING CONES ON SENDER LINK SWITCHES	YES A NO B

MARKER	SD-26002-01 ISS. 1
TRK. LINK CONN.	SD-26033-01 ISS. 3D
OUT SENDER LINK FR.	SD-25734-01 ISS. 7
OUT SENDER - MF	SD-26051-01 ISS. 1
OUT SENDER - DP	SD-26050-01 ISS. 1
OUT TRUNK CKT.	SD-26086-01 ISS. 4A
IAO TRUNK CKT.	SD-26061-01 ISS. 3A
OG SDR. CONN.	SD-26059-01 ISS. 1

INC. REG. LINK CKT.

HORIZONTAL GROUP 3

BASIC SWITCH

SUPPLEMENTARY SWITCH

SM9
SM6
LK
SMO
ST
RB

TO SHEET 2

SM9
SM6
LK
SMO
ST
RB

TO SHEET 2

SM9
SM6
LK
SMO
ST
RB

TO SHEET 2

HM (REG 9)
HM (REG 0)
OH (REG 0)
OH (REG 9)

TO SHEET 2

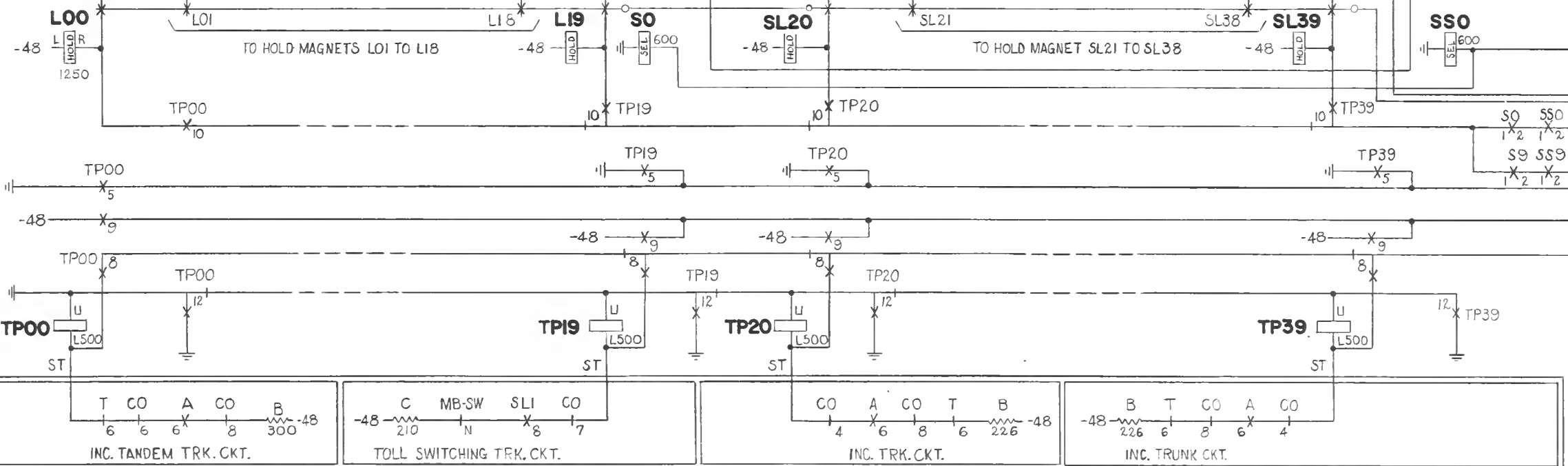
ISSUE
DATE
1-21-35

2 SHEETS, SHEET 1

38-Y-4335

AMERICAN TELEPHONE & TELEGRAPH CO.

PRINTED IN U. S. A.



HORIZONTAL GROUPS 1 & 2

TO LINK SWITCHES AND TP-RELAYS FOR INTERMEDIATE HORIZONTAL GROUPS 1 & 2

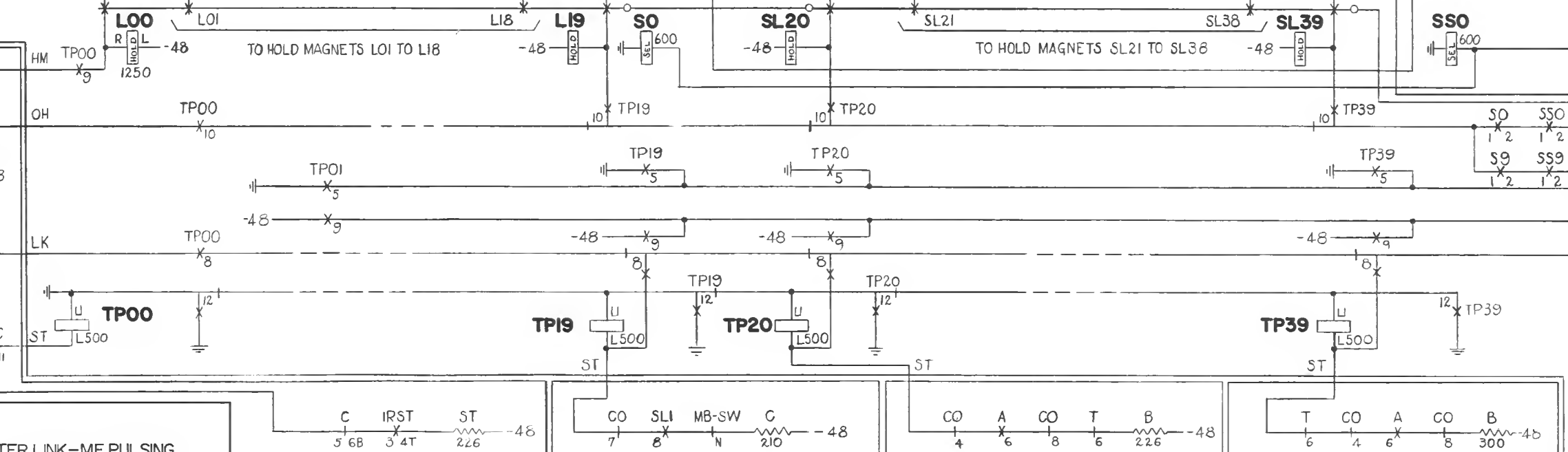
BASIC SWITCH

SUPPLEMENTARY SWITCH

SM9
SM6
LK
SMO
ST
RB

TO SHEET 2

HORIZONTAL GROUP 0



INCOMING REGISTER LINK-MF PULSING
REGISTER PREFERENCE AND SEIZURE
160 TRUNK CAPACITY FRAME
NON-BY LINK OPERATION

2 SHEETS, SHEET 1

NO. 5 CROSSBAR

TOLL SWITCHING TRK. CKT.

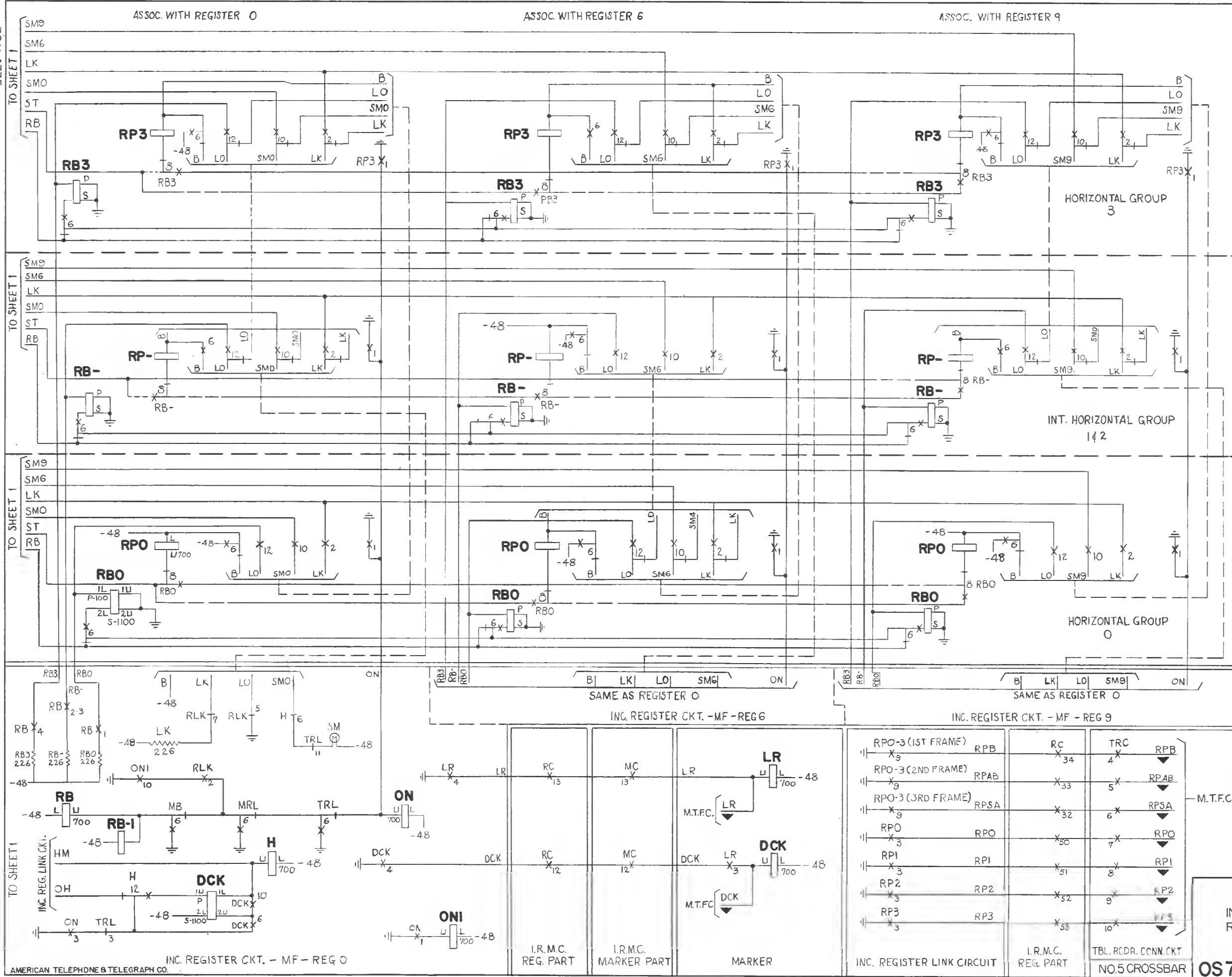
INC. TRK. CKT.

INC. TANDEM TRK. CKT.

OS 733-1

38-Y-4335 2 SHEETS, SHEET 2

ISSUE 1
DATE 4-21-55



- NOTES:
1. VERTICAL "00" IN "0" HORIZONTAL GROUP OF THE FIRST FRAME IN A LINK GROUP IS USED BY THE AUTOMATIC MONITOR OR INC. REG. TEST CKT. TO GAIN ACCESS TO ANY REG. FOR TESTING.
 2. FOR CHAIN CKT. ARRANGEMENT OF LEADS ST, LK, SM-, LO AND B SERVING ANY ONE FRAME, SEE FS 2,3 AND 6 SD-26048-01. FOR CHAIN CKT. ARRANGEMENTS, FOR TWO OR THREE FRAMES IN A LINK GROUP, SEE FS101 SD-26048-01.
 3. FOR PRACTICAL TRUNK LIMITATIONS AND ARRANGEMENTS SEE NOTE 102,106 AND 301 SD-26048-01-D1.

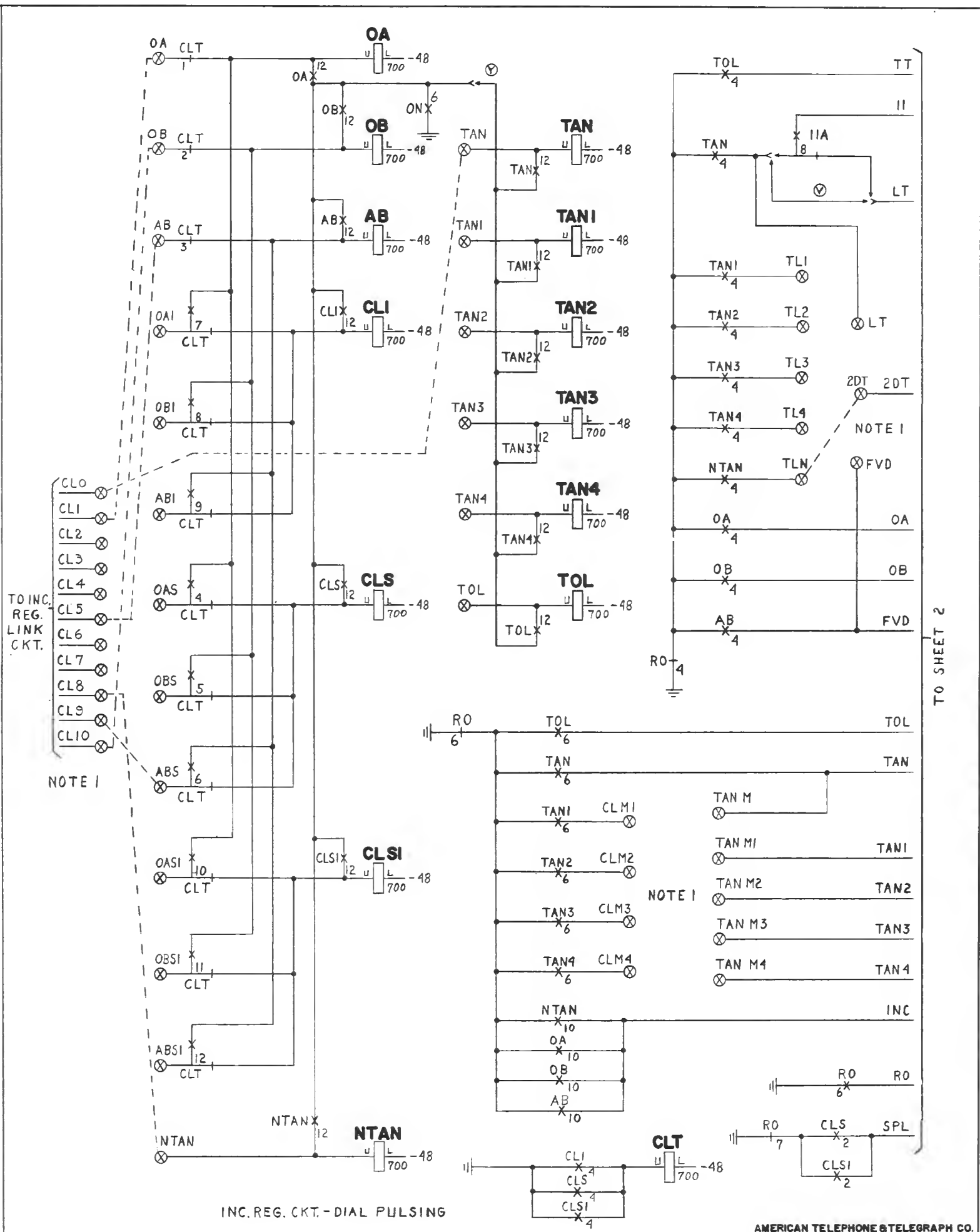
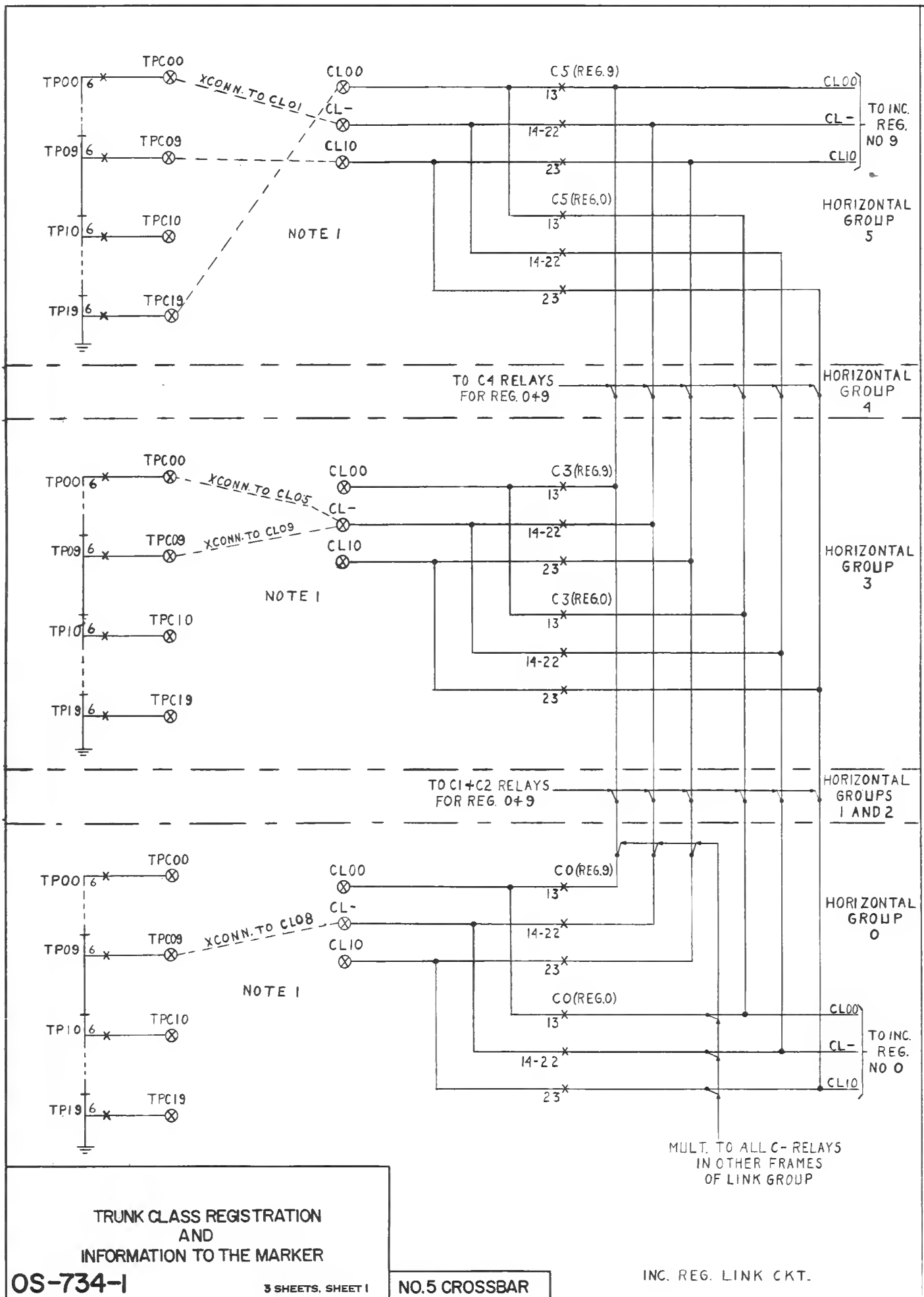
INC. TRK. CKT.
TDLL SWITCHING TMR. CKT.
INC. TANDEM TRK. CKT.
AUTO. MONITOR CKT.
INC. REG. LINK CKT.
INC. REG. CKT. - MULTI FREQ. PULSING
INC. REG. MKR. CONN. CKT. - REG. PART
INC. REG. MKR. CONN. CKT. - MKR. PART
TROUBLE REC. CONN. CKT. (I.R.M.C.)
MARKER CKT.

SD-26070-01 ISS. 2D
SD-26081-01 ISS. 1
SD-26071-D1 ISS. 1
SD-2568D-01 ISS. 25
SD-2608D-01 ISS. 4D
SD-26042-01 ISS. 3D
SD-26026-D1 ISS. 4D
SD-26025-01 ISS. 2D
SD-26029-01 ISS. 2D
SD-26026-01 ISS. 1

INCOMING REGISTER LINK - MF PULSING
REGISTER PREFERENCE AND SEIZURE
160 TRUNK CAPACITY FRAME
NON-BY LINK OPERATION

OS733-1

2 SHEETS, SHEET 2



ISSUE	1	K.K.
DATE	4-20-55	

3 SHEETS, SHEET 1

38-Y-4342



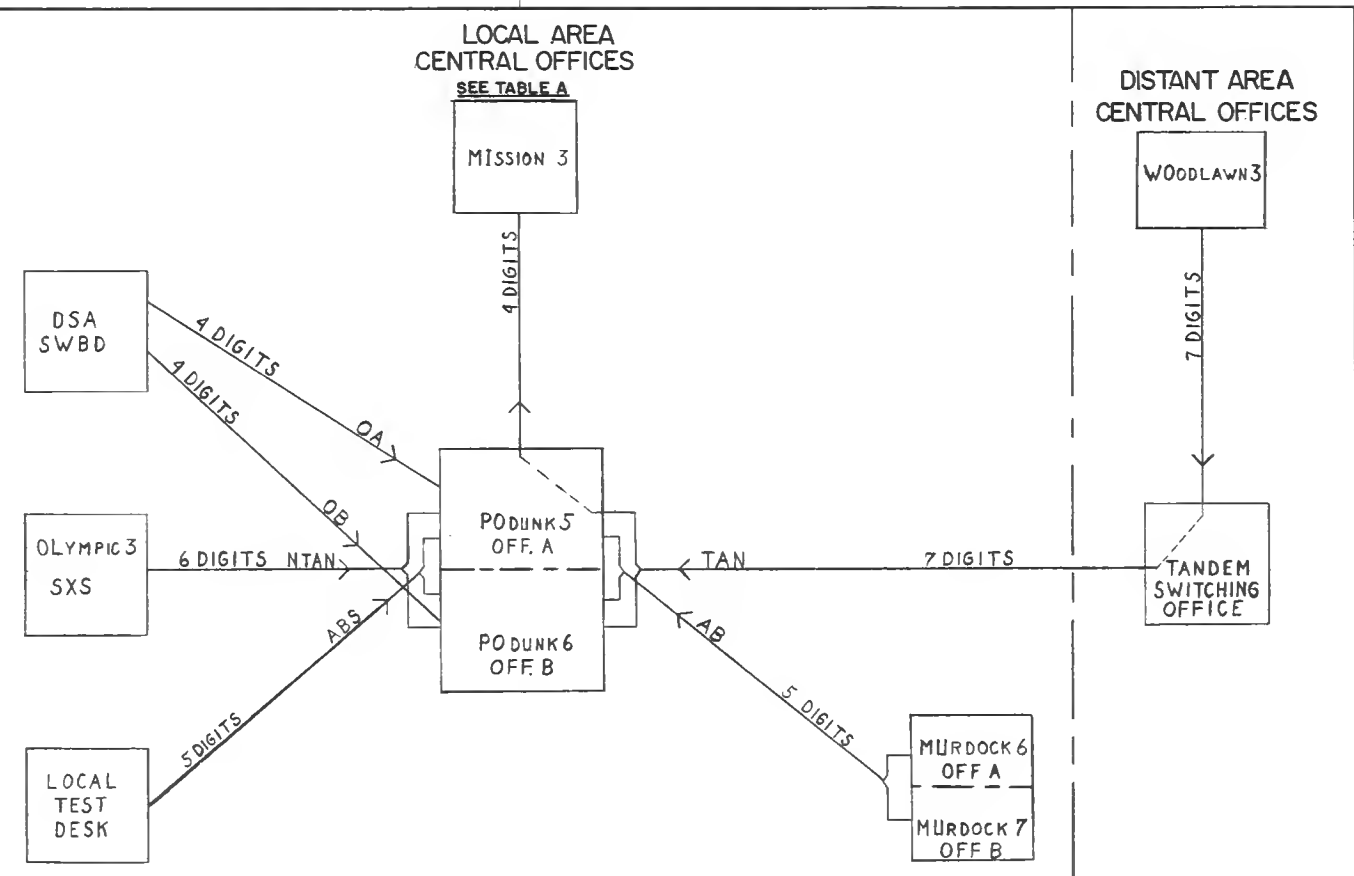
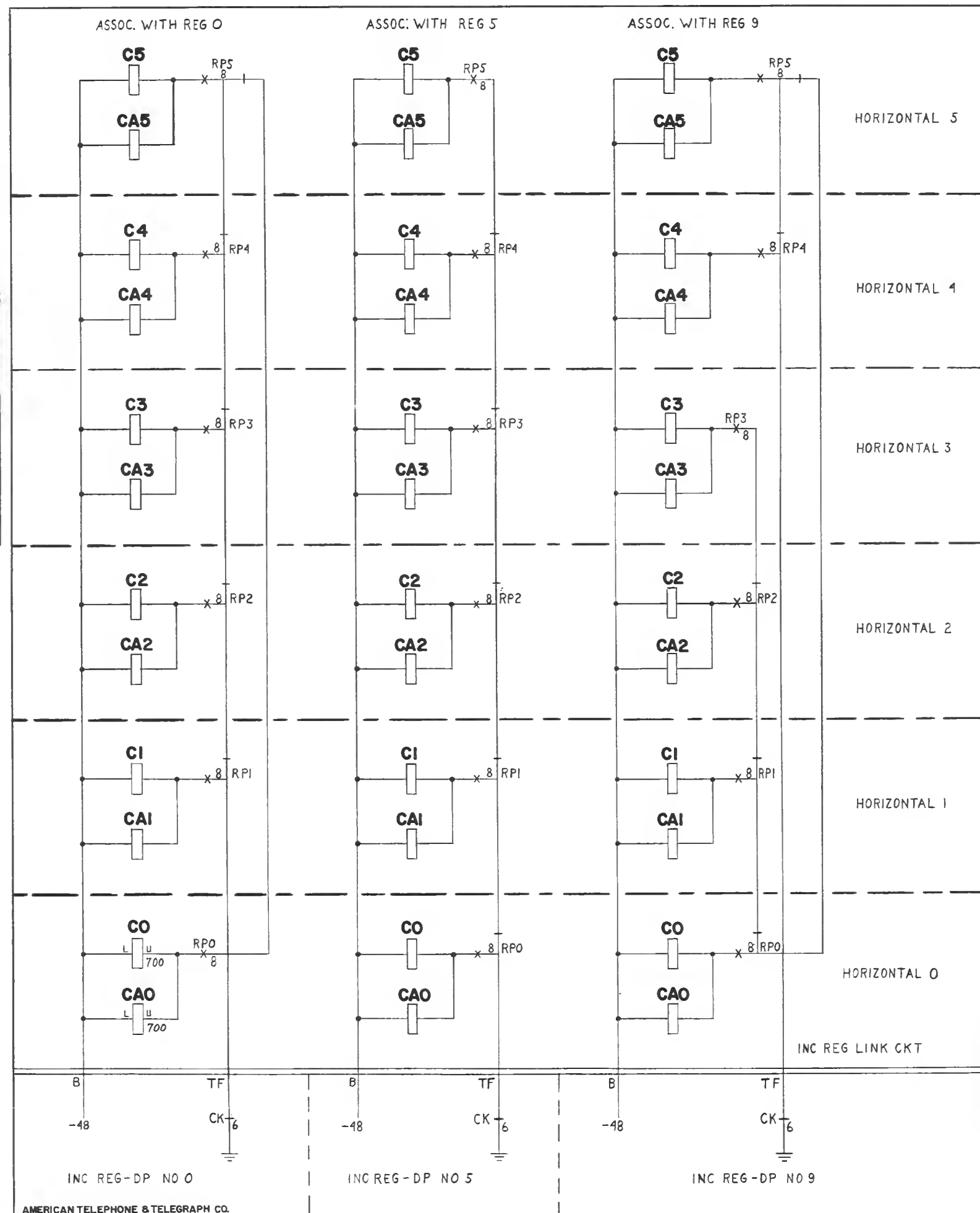


TABLE A-TYPICAL TRUNK CLASS TREATMENTS

CALLING OFF. OR SWBD.	CALLED OFFICE	INC. REG. LINK		INC. REG.		MARKER		TYPE OF CALL RELAY	REMARKS
		HORZ GRP	CONNECT	CONNECT	TRK. CLASS RELAY	CONNECT	TRANSLATION RELAY		
MURDOCK 6 or 7	PODUNK 5 OR 6	3	TPC00	CLO5	AB	AB	IN	INC	SEE OS 715-1 SH.1, OS 716-1 SH.2 FOR CODE TRANS. AND ROUTE.
OLYMPIC 3	PODUNK 5 OR 6	0	TPC09	CLO8	NTAN	NTAN	IN	INC	SEE OS 715-1 SH.1-2, OS 716-1 SH.2 FOR CODE TRANS. AND ROUTE.
DSA SWBD	PODUNK 5	5	TPC00	CLO1	OA	OA	IN	INC	NO ADDITIONAL TRANS. REQUIRED
DSA SWBD	PODUNK 6	5	TPC09	CLIO	OB	OB	IN	INC	
WOODLAWN 3	PODUNK 5 OR 6 (VIA TAN. SW. OFF)	5	TPC19	CLO0	TAN	TAN	TANO	TAC	SEE OS 715 SH.1-2-3, OS 716-1 SH.2 FOR CODE TRANS. AND ROUTE.
WOODLAWN 3	MISSION 3 (VIA TAN. SW. OFF) (VIA PODUNK OFF)	5	TPC19	CLO0	TAN	TAN	TANO	TAC	SEE OS 715 SH.1-2-3, OS 716-1 SH.3 FOR CODE TRANS. AND ROUTE.
LOCAL TEST DESK	PODUNK 5 OR 6	3	TPC09	CLO9	ABS	AB, CLS (CLT)	IN	INC	SPECIAL MARKER. SEE OS 715-1 SH.1, OS 716-1 SH.2 FOR CODE TRANS. AND ROUTE.

NOTES

1- SEE TABLE A FOR TYPICAL EXAMPLES OF CROSS CONNECTIONS. FOR COMPLETE CROSS CONNECTION INFORMATION SEE SECTION "D" OF PARTICULAR SD DRAWINGS. FOR TRUNKS ASSOCIATED WITH TP-RELAYS, SEE OS 732-1 SHEET 1.

2-

FEATURE OR CONDITION	CONNECT		CONDITION
	FROM	TO	
WHEN MANUAL INC. TRKS MAY HAVE CHARGE OR NON CHARGE SUPV.	MAN	LCH	NON CHARGE SUPV.
WHEN SUPV. IS FIXED BY INC. TRK. CLASS RELAY	MAN	TCH	CHARGE SUPV.

3- FOR CROSSCONNECTIONS SEE TABLE A AND C SD-26032-01-D3
 4- FOR CROSSCONNECTIONS SEE SD-26002-01-D11 PART 22 AND 23.
 5- FOR CROSSCONNECTIONS SEE SD-26002-01-D12 PART 26
 6- FOR CROSSCONNECTIONS SEE SD-26002-01-D11 PART 24

OPTIONS

FEATURE OR OPTION	CONDITION	WIRING
INTERCEPT DISCRIMINATION BETWEEN LOCAL AND TOLL INC. CALLS	YES	X
	NO	Y
NO TAN OR IT TRKS		V

INC. REG. LINK CKT.
 INC. REG. CKT.-DP
 INC. REG. MKR. CONN. - REG. PART
 INC. REG. MKR. CONN. - MKR. PART
 PREFERENCE CONTROL CKT.
 TRUNK LINK CKT.
 TRUNK LINK CONN. CKT.
 2 WAY INTERTOLL TRK. CKT.
 MARKER

SD-26048-01 ISS. 4D
 SD-26041-01 ISS. 3D
 SD-26026-01 ISS. 4D
 SD-26025-01 ISS. 2D
 SD-26029-01 ISS. 2D
 SD-26032-01 ISS. 4D
 SD-26033-01 ISS. 3D
 SD-25843-01 ISS. 16B
 SD-26002-01 ISS. 1

TRUNK CLASS REGISTRATION
 AND
 INFORMATION TO THE MARKER

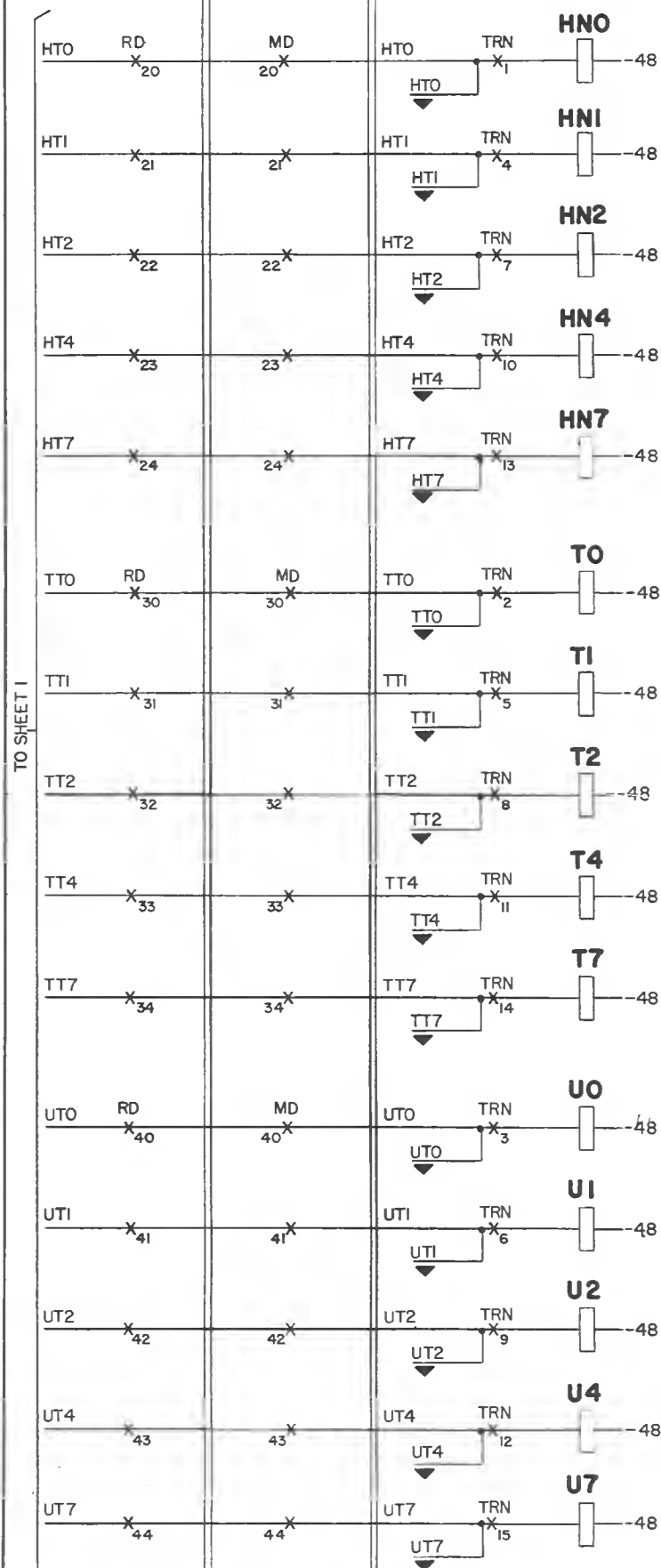
NO.5 CROSSBAR

OS 734-1

3 SHEETS, SHEET 3

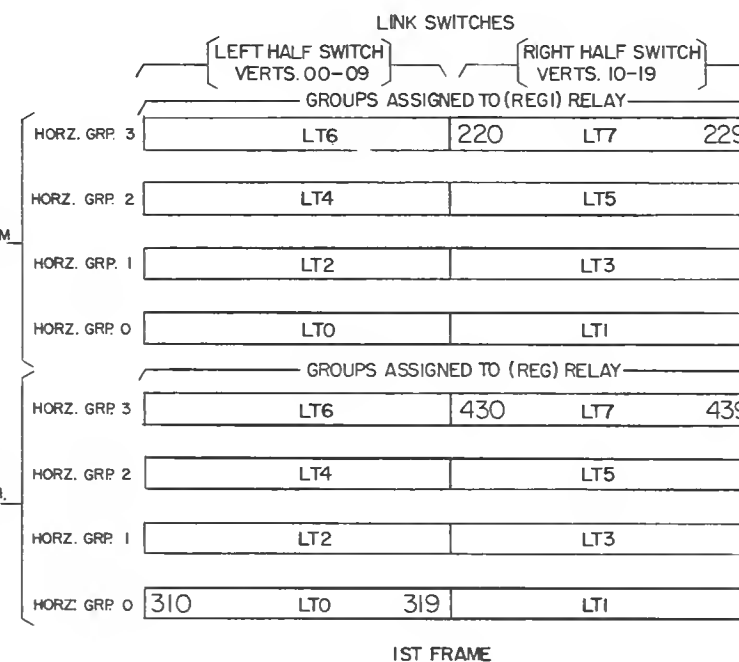
ISSUE	1	K.K.				
DATE	4.20.55					

TO SHEET 1

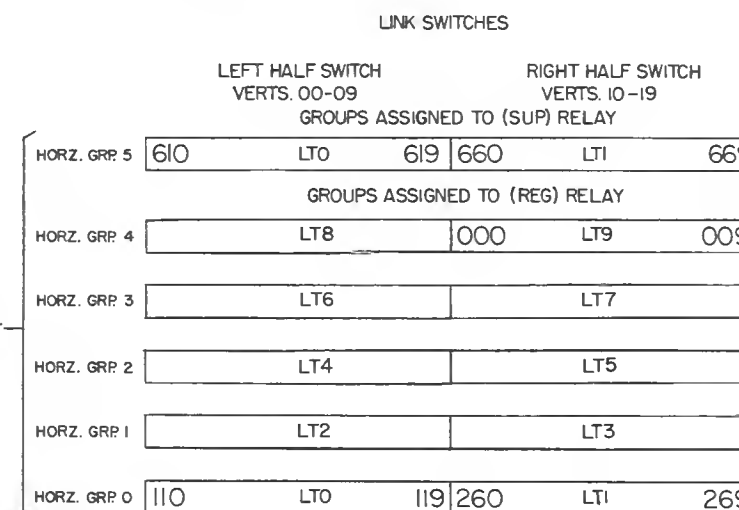


SUPPL. SWS.
EACH. HORZ. GRP.
CONNECTS TO "B" TERM-
FOR XCONN.
TO LHO-LH3
(SEE NOTE 3)

BASIC SWITCH.
EACH HORZ. GRP.
CONNECTS TO "A" TERM.
FOR XCONN.
TO LHO-LH3
(SEE NOTE 3)

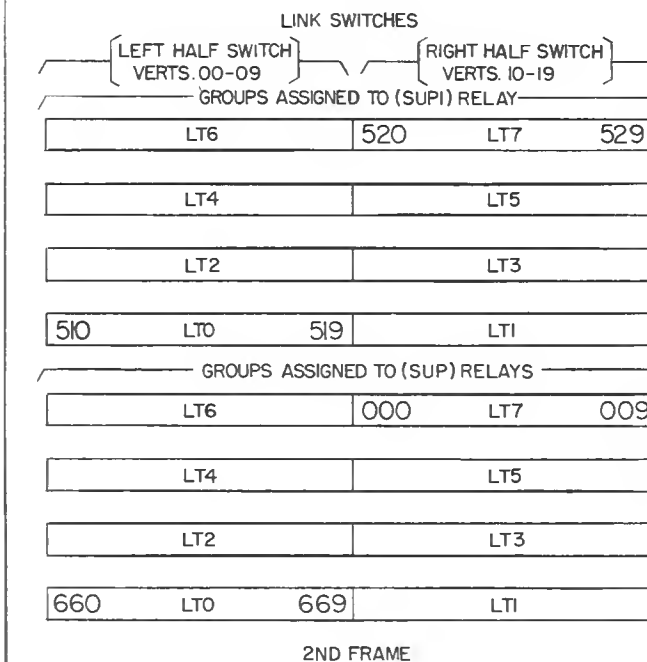


BASIC SWITCH.
EACH HORZ. GRP.
CONNECTS TO "A" TERM.
FOR XCONN
TO LHO-LHI
(SEE NOTE 3)



NOTES

I. TYPICAL TRUNK NUMBER ASSIGNMENTS
160 TRUNK CAPACITY FRAMES



3.

A-	LHO OR LHI	DP LK GRPS WITH DIRECT PLS TRKS ONLY. TRKS REQ TRK NO ASSIGNED TO	BASIC SWS ON 1ST OR 2ND FRS OR BOTH CROSS-CONNECTION ON EACH FRAME
B-	LHO OR LHI		SUPPL SWS ON 1ST OR 2ND FRS OR BOTH CROSS-CONNECTION ON EACH FRAME
A-	LHO	DIAL PULSE GRPS WITH ALL BY-LINK TRKS OR WITH BY- LINK AND DIRECT PLS TRKS BASIC SWS ONLY	TRKS ON HGO-4
	LHI		TRKS ON HG5
A-	LHO-3	MULTI FREQ OR REV PLS TDM LK GRPS REQ TRK NO. ASSIGNED TO	TRKS ON BASIC SWS OF 1ST, 2ND OR 3RD FR OR ANY COMB.
B-	LHO-3		TRKS ON SUP SWS

4. SEE OS 720-I, 721-I, 722-I & 724-I FOR FUNCTIONS OF HOW TRUNK NUMBER IS TRANSLATED TO A LINE LINK FRAME LOCATION.
5. FOR COMPLETE CROSS-CONNECTION INFORMATION SEE "D" SECTION OF REGISTER SD-DRAWING.
6. FOR TRK. CAPACITIES ON VARIOUS CONDITIONS SEE SD-26048-OI DI NOTE 102.
7. TP00 TO TP39 RELAYS ARE ASSOC. WITH SAME HORZ. GROUP OPTIONS

FEATURE OR CONDITION	WIRING
120 TRUNK CAPACITY FRAME	H
160 TRUNK CAPACITY FRAME	J
40 TRKS. PER HORZ. GRP.	W
20 TRKS. PER HORZ. GRP.	X
DP REG. ONLY	DP
MF REG. ONLY	MF

INC. REG. LINK CKT.
INC. REG. MKR. CONN.—REG. PART
INC. REG. MKR. CONN.—MKR. PART
INC. REG.—MF
INC. REG.—DP
MARKER

SD-26048-01 ISS. 4D
SD-26026-01 ISS. 4D
SO-26025-01 ISS. 2C
SD-26042-01 ISS. 3D
SD-26041-01 ISS. 3D
SD-26002-01 ISS. 1

INCOMING REGISTER - MF - DP
TRANSFER OF TRUNK NUMBER FROM INC
REG. LINK TO INC. REG. AND INC. REG. TO
MARKER



I.	FEATURE OR CONDITION	CONNECT		CONDITION
		FROM	TO	
	TRUNK LINK FRAME GROUP	FG-	GO	WHEN TRKS. IN HORZ. GRP ARE ASSOC. WITH TRK. LINK FRAMES 00-09
		FG-	GI	WHEN TRKS. IN HORZ. GRP ARE ASSOC. WITH TRK. LINK FRAMES 10-19
	TRUNK LINK FRAME UNITS	TPU-	TFU-	CONNECT EACH TRUNK TPU- TO THE TFU- WHICH CORRES. TO THE UNITS DIGIT OF THE TRK. LINK FRAME WHICH THE FRK. IS ASSOC.

2. TYPICAL EXAMPLE -
TRUNK ASSIGNED TO HORZ. GRP 0, RELAY TPO9 AND ASSOC. WITH
TRUNK LINK FRAME 09 WOULD BE CROSS-CONNECTED AS SHOWN.

INC. REG. LINK CKT.
INC. REG. CKT.—DP
I.R.M.C. CKT.—REG. PART
I.R.M.C. CKT.—MKR. PART
MARKER CKT.

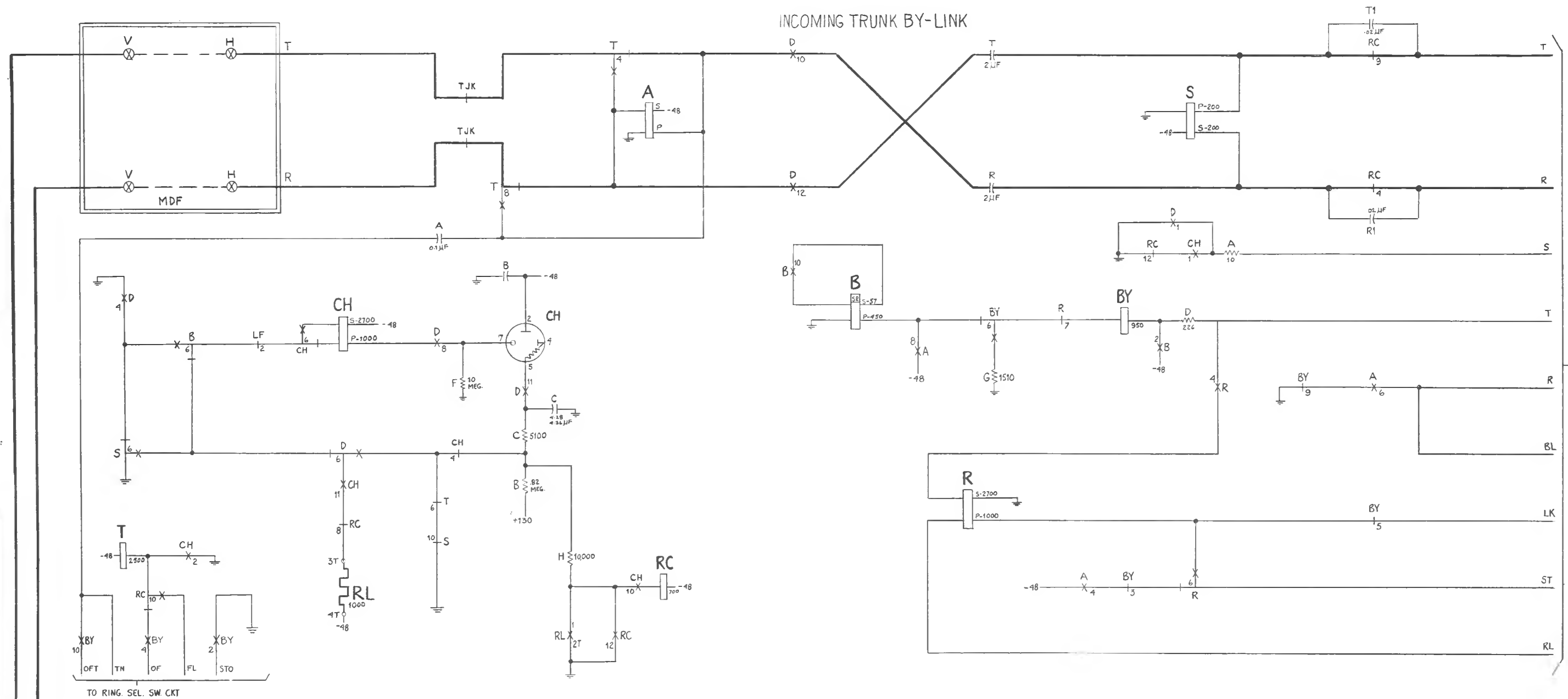
SD-26048-01 ISS. 4D
SD-26041-01 ISS. 3D
SD-26026-01 ISS. 4D
SD-26025-01 ISS. 2
SD-26002-01 ISS. 1

INCOMING REGISTER-DP
TRANSFER OF TRUNK LINK FRAME
NUMBER FROM INC. REG. LINK TO REG.
AND REG. TO MARKER

NO.5 CROSSBAR

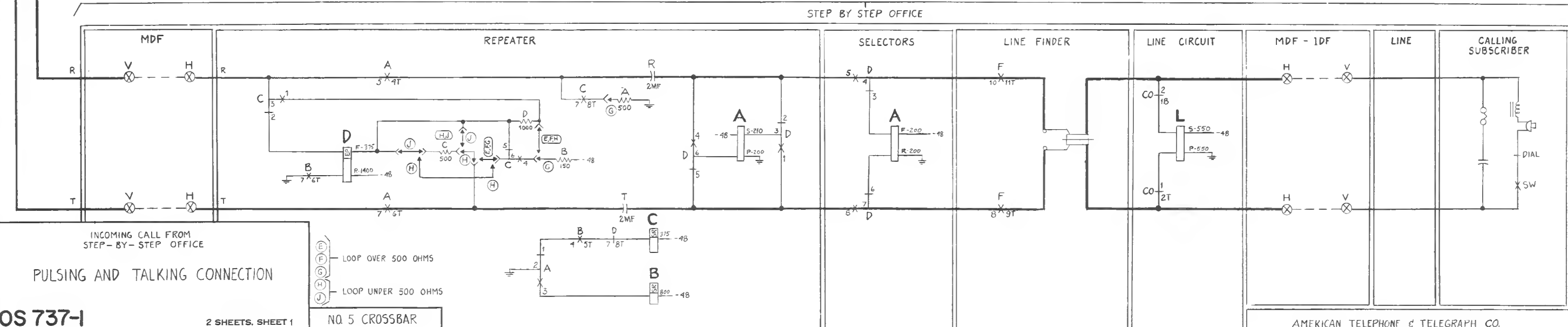
OS 736-1

INCOMING TRUNK BY-LINK



TO SHEET 1

STEP BY STEP OFFICE



OS 737-1

2 SHEETS, SHEET 1

NO. 5 CROSSBAR

AMERICAN TELEPHONE & TELEGRAPH CO.

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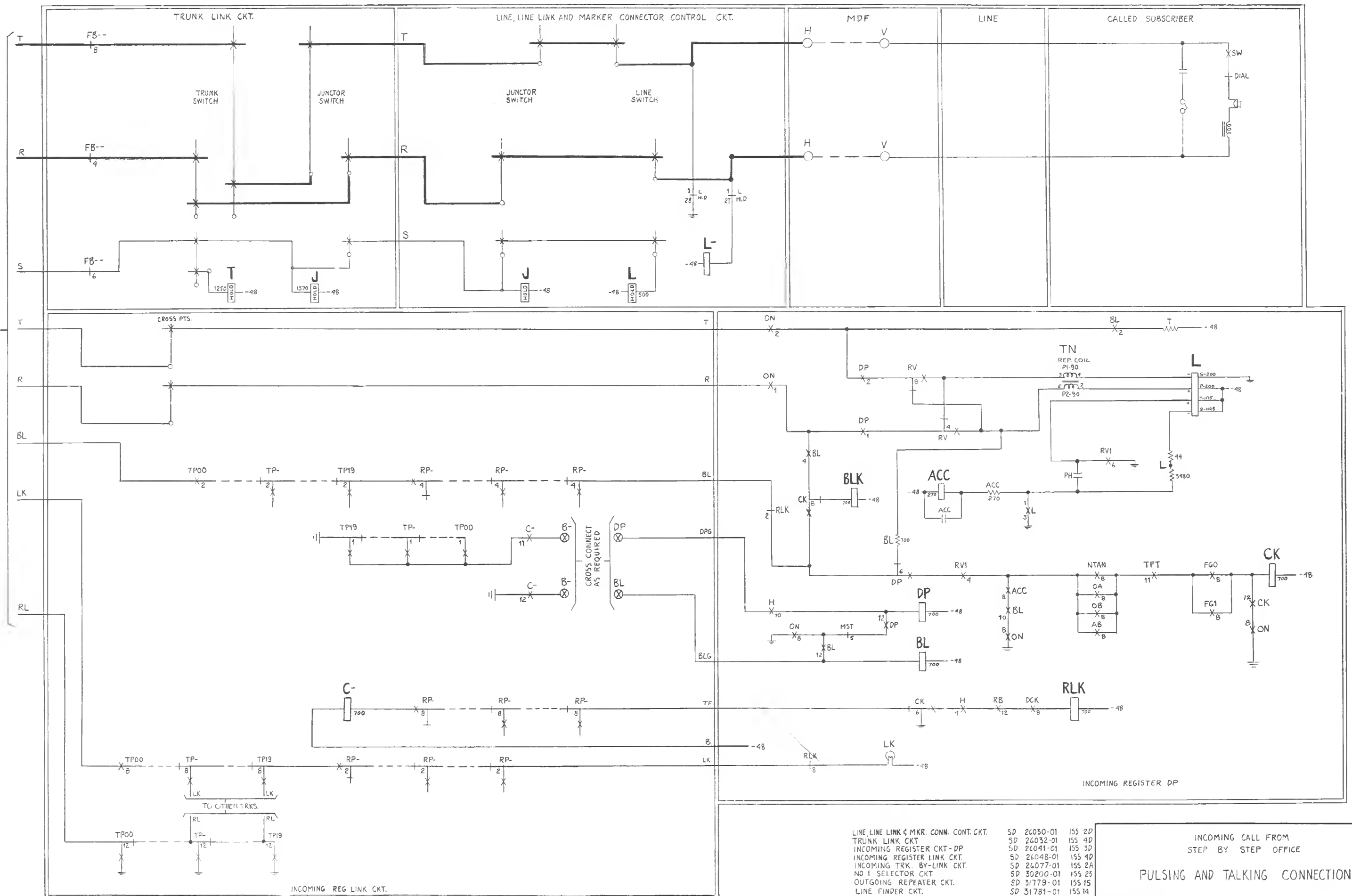
ISSUE	1	M16
DATE	4-20-55	

2 SHEETS, SHEET 1

38-Y-4343

ISSUE	4	M.R.				
DATE	4-20-55					

TO SHEET 2



LINE LINK 4 MKR. CONN. CONT. CKT.	SD	26030-01	155 2D
TRUNK LINK CKT.	SD	26032-01	155 4D
INCOMING REGISTER CKT-DP	SD	26041-01	155 4D
INCOMING REGISTER LINK CKT.	SD	26048-01	155 4D
INCOMING TRK. BY-LINK CKT.	SD	26077-01	155 2A
NO 1 SELECTOR CKT.	SD	30200-01	155 23
OUTGOING REPEATER CKT.	SD	31779-01	155 15
LINE FINDER CKT.	SD	31781-01	155 14

INCOMING CALL FROM
STEP BY STEP OFFICE

PULSING AND TALKING CONNECTION

NO. 5 CROSSBAR

OS 737-1

2 SHEETS, SHEET 2

TYPICAL MARKER START TREATMENTS

TYPE OF CALL	MARKER STARTS AFTER	TRK CLASS	TRANSLATION RELAYS OPERATED	DIGITS DIALED	REMARKS
COMPLETING TO OFFICE A OR B. SEPARATE TRKS.	4 DIGITS	OA OR OB		1234	NO OFFICE CODE RECEIVED SEE BLOCK DIAGRAM OS-734-1
COMPLETING TO OFFICE A OR B. COMMON TRKS. 1 DIGIT OFF. CODE	5 DIGITS	AB		C1234	C DIGIT OF OFFICE CODE RECEIVED ONLY. SEE BLOCK DIAGRAM OS-734-1
COMPLETE TO OFFICE A OR B	6 DIGITS	NTAN		BC1234	ORIGINATING SXS OFFICE USES A DIGIT OF OFFICE CODE. SEE BLOCK DIAGRAM OS-734-1
TANDEM THRU TO DISTANT OFFICE	7 DIGITS	TAN		ABC1234	ALWAYS STARTS MARKER AFTER 7 DIGITS. SEE BLOCK DIAGRAM OS-734-1
TANDEM THRU TO DISTANT OFFICE A DIGIT 5	7 DIGITS	TAN 1	TAA TA1 TA4	5BC1234	A DIGIT TRANSLATION.
TANDEM THRU TO DISTANT OFFICE A DIGIT B	7 OR B DIGITS	TAN 1	TAA TA1 TA7	BBC1234(5)	A DIGIT TRANSLATION. SOME SUB. NUMBERS HAVE PARTY LETTERS. "H" TERMINAL USED TO START MKR. WHEN BTH DIGIT IS DIALED.
TANDEM THRU TO DISTANT OFFICE A DIGIT 4 B DIGIT 3	5 DIGITS	TAN 2	TAA,TBA TAO,TA4 TB1,TB2	43123	3 DIGIT SUB. NUMBERS. A AND B DIGIT TRANSLATION. 2 DIGIT OFFICE CODE.
TANDEM A DIGIT 4 B DIGIT 9	6 DIGITS	TAN 2	TAA,TBA TAO,TA4 TB2,TB7	491234	ORIGINATING SXS OFFICE USES A DIGIT OF OFFICE CODE. SEE BLOCK DIAGRAM OS-734-1
VACANT CODE	1 DIGIT	TAN 1 TAN 2	TAA TAO,TA2	2XXXXXX	MARKER SETS RINGING SWITCH TO RETURN OVERFLOW SIGNAL TO TRK.

2. FOR "C" DIGIT TRANSLATION, II FOREIGN AREA DIRECTING CODES, TOLL TYPE CODE TREATMENT AND OTHER DETAILED CROSS CONNECTIONS SEE SD-26041-01 SECTION D.

INC. TRUNK CKT. - DIRECT PULSE	SD-26070-01	ISS. 2D
INC. TRUNK CKT. - BY-LINK	SD-26077-01	ISS. 2A
INC. REGISTER LINK CKT.	SD-26048-01	ISS. 4D
INC. REGISTER - DIAL PULSING	SD-26041-01	ISS. 3D
CONNECTOR CONTROL CKT. - I.R.M.C.	SD-26029-01	ISS. 2D
I.R.M.C. - REGISTER PART	SD-26026-01	ISS. 4D
I.R.M.C. - MARKER PART	SD-26025-01	ISS. 2D
MARKER	SD-26002-01	ISS. 1

INCOMING REGISTER - DP
DIGIT TRANSLATION, MARKER
START AND MARKER RELEASE

OS 739-1

2 SHEETS, SHEET 1

NO.5 CROSSBAR

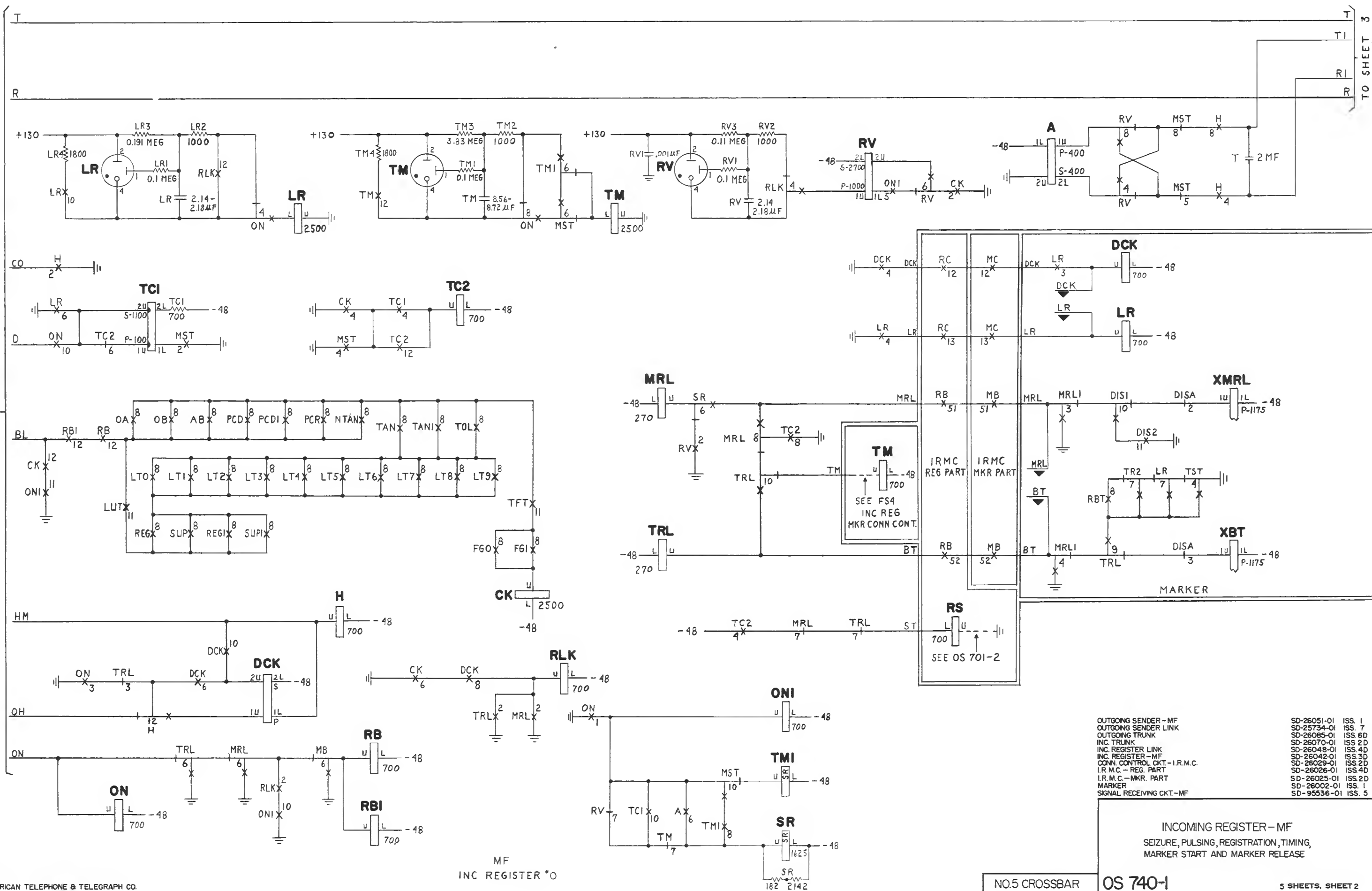
ISSUE	1	K	K						
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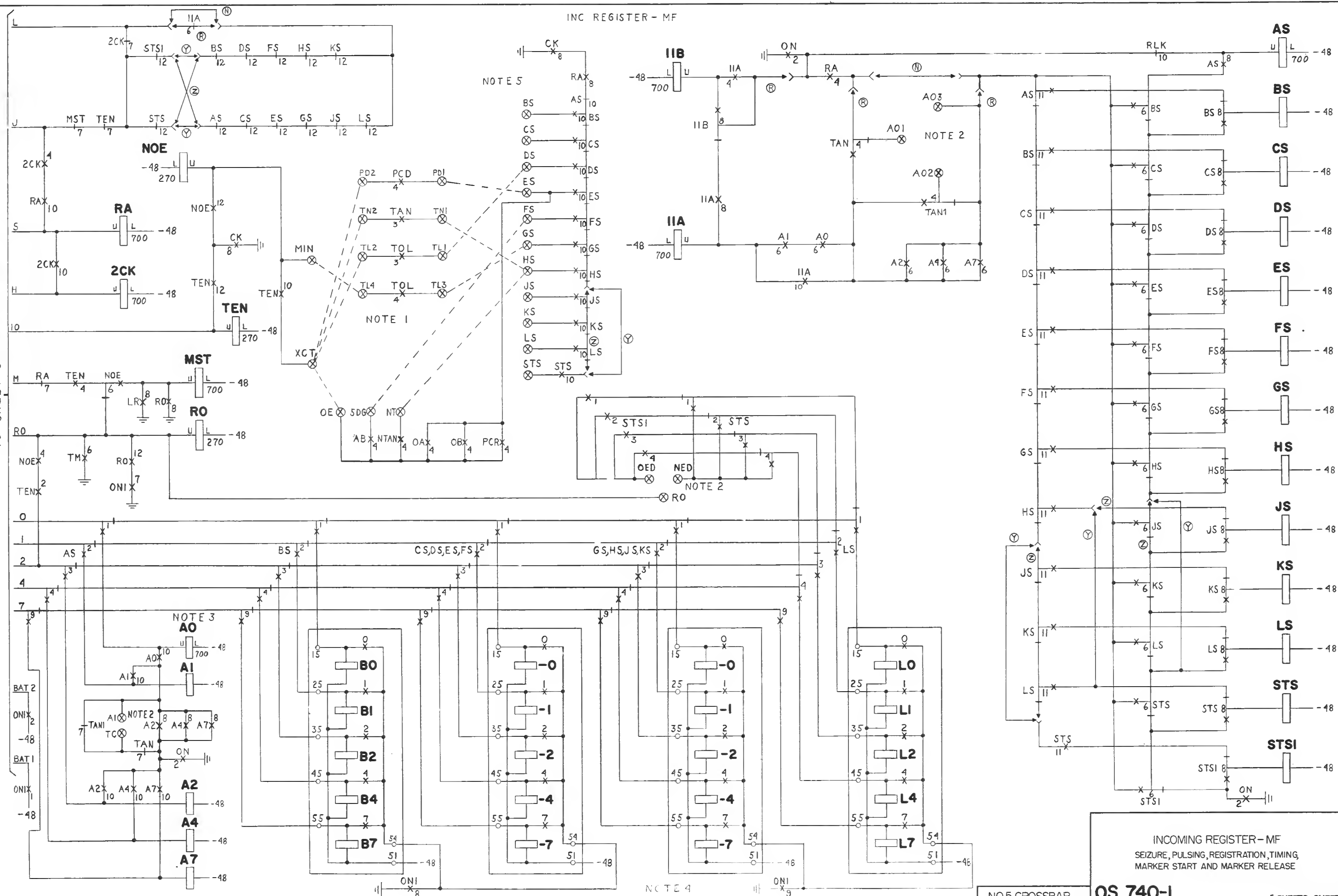
2 SHEETS, SHEET 1

38-Y-4348

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INCOMING REGISTER-MF
SEIZURE, PULSING, REGISTRATION, TIMING,
MARKER START AND MARKER RELEASE

NO.5 CROSSBAR

OS 740-1

ISSUE	1	K. K.
DATE	4-14-55	

NOTES 1. TYPICAL "NUMBER OF DIGITS" CROSS-CONNECTIONS (ASSUME REGISTER EQUIPPED FOR 11 DIGITS)

FEATURE	CLASS	NO. OF DIGITS	CONNECT		* REMARKS
			FROM	TO	
FOR REDUCTION OF TROUBLE RECORDER CARDS CAUSED BY OPERATOR ERRORS, BY MATCHING NUMBER OF DIGITS EXPECTED, WITH NUMBER RECEIVED ON EACH TRUNK CLASS. (OPERATION OF NOE RELAY)	OA, OB, PCR	4	OE	XCT	OA, OB AND PCR ARE WIRED DIRECTLY AND TRANSMIT ONLY 4 DIGITS
	AB	5			
	NTAN	7			
	AB	5	5DG	FS	TRANSMITS 5 DIGITS ONLY
	NTAN	7	NT	HS	TRANSMITS 7 DIGITS ONLY
	PCD	4	PD1 PD2	ES XCT	TRANSMITS 4 DIGITS ONLY
	TAN	7	TN1 TN2	HS XCT	TRANSMITS 7 DIGITS ONLY
	TOL	3	TL1 TL2	DS XCT	TRANSMITS 3,6,7,8,9,10 AND 11 3 TREATED AS EXACT NO. 6 TREATED AS MINIMUM NO.
		6,7,8,9,10,11	TL3	GS	
			TL4	MIN	
FOR DETAILED CROSS-CONNECTIONS OF OTHER CONDITIONS SEE SD-26042-01-D7 PART 3					
* MARKER WILL START AFTER PROPER NUMBER OF DIGITS AND START PULSE ARE RECEIVED					

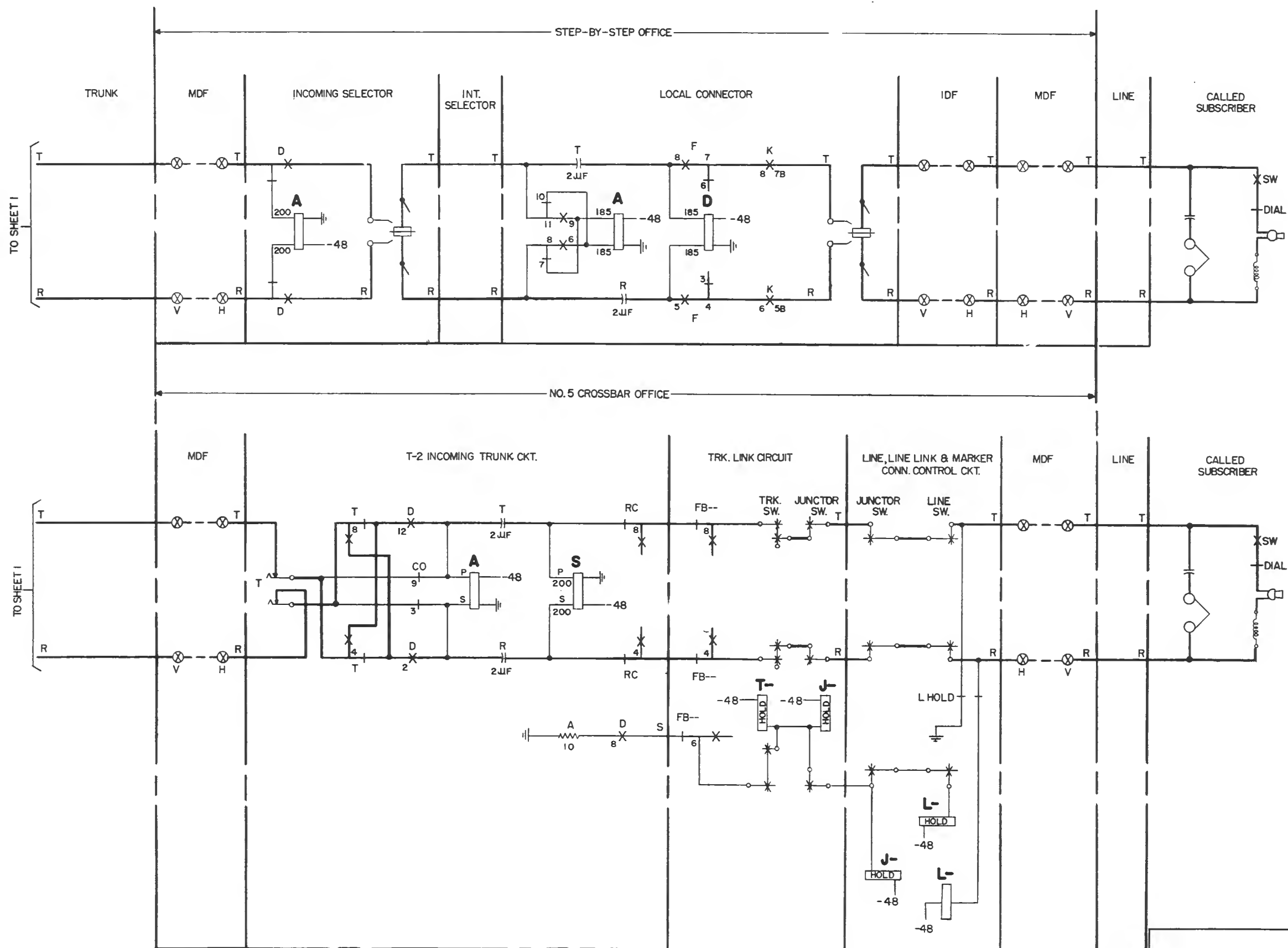
- 2.- FOR CROSS-CONNECTION INFORMATION SEE SD-26042-01-D7
- 3.- WHEN 11 FOREIGN AREA OR 11X SERVICE CODES ARE REQUIRED A WIRE SPRING RELAY IS USED INSTEAD OF THE DRY REED TYPE FOR THE "A" DIGIT REGISTER.
- 4.- CONTACTS OF REGISTRATION RELAYS THAT TRANSFER CALLED NUMBER INFORMATION TO MARKER FOR NUMBER GROUP ARE SHOWN ON OS 720-1. TRANSFER OF CALLED NUMBER TO MARKER TO SENDER IS NOT SHOWN BUT IS SIMILAR TO DP REGISTER SHOWN ON OS 719-1.
- 5.- NO OPERATOR ERROR XCONN.
- 6.- STRAP RESISTANCES (L1) AND (L2) AS REQUIRED SO THAT THE RESISTANCE OF RETARDATION COIL (A) PLUS RESISTANCES (L1) AND (L2) IS 6300 Ω \pm 1% AT 68° F. AMBIENT TEMPERATURE. WHEN AMBIENT TEMPERATURE EXCEEDS 68° F. ADD 1% TO RESISTANCE VALUE FOR EACH 4° F. ABOVE THIS FIGURE.

NUMBER OF DIGITS TRANSMITTED	CORRES. TERM.	
	REG. EQUIPPED FOR	
	B DIGITS	11 DIGITS
1	BS	BS
2	CS	CS
3	DS	DS
4	ES	ES
5	FS	FS
6	GS	GS
7	HS	HS
8	STS	JS
9		KS
10		LS
11		STS

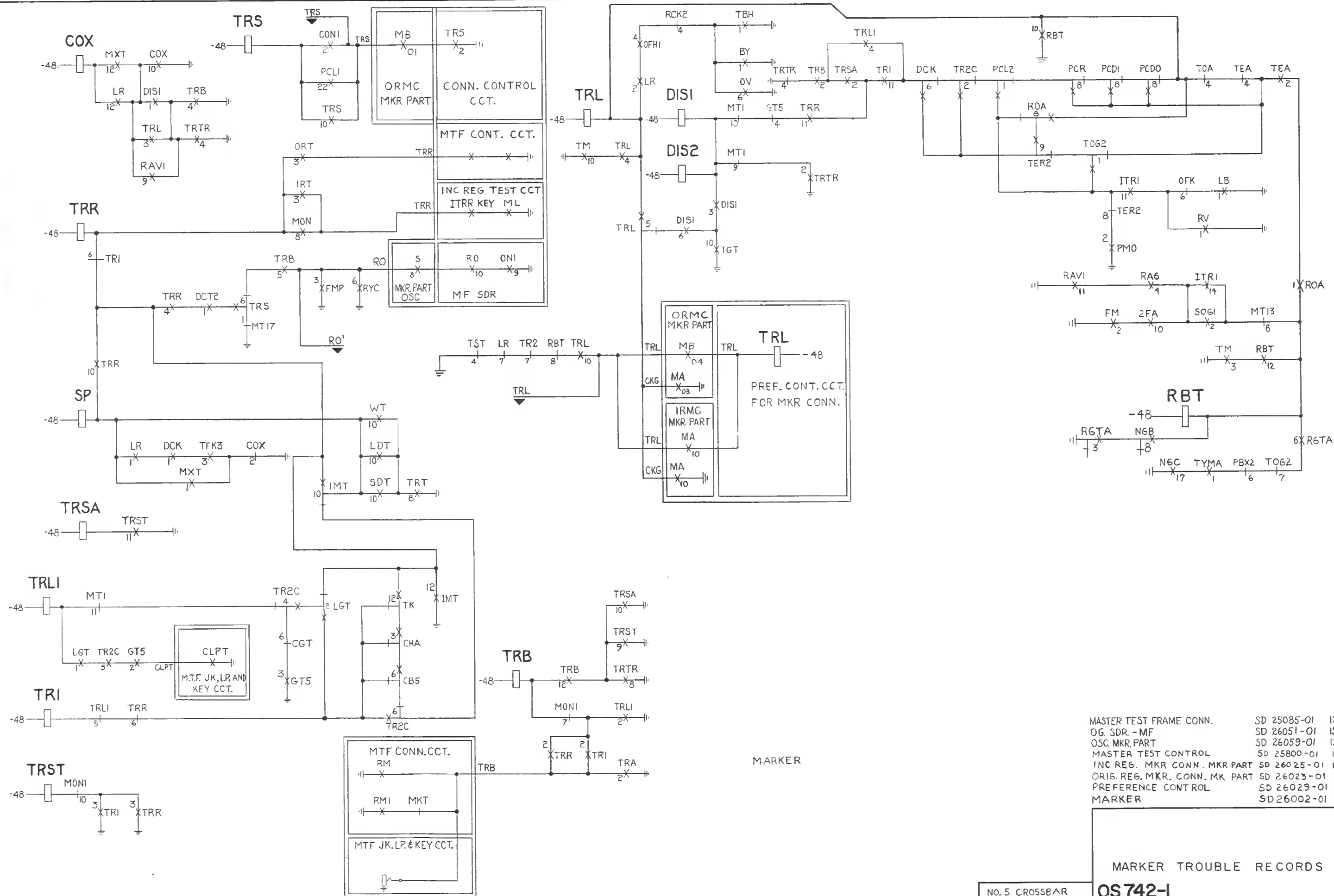
OPTIONS

FEATURE OR OPTION			WIRING
DIGIT REGISTER FOR		8 DIGITS	Y
		11 DIGITS	Z
"A" DIGIT REGISTER	WHERE 11 FOREIGN AREA OR 11X SERVICE CODES ARE	REQUIRED	R
		NOT REQUIRED	N
HORIZONTAL GROUP EQUIPPED WITH		TWENTY VERT.	T
		FORTY VERT.	F

INCOMING REGISTER - MF
SEIZURE, PULSING, REGISTRATION, TIMING
MARKER START AND MARKER RELEASE



ESTABLISHED CONNECTION
OUTGOING CALL



SD-25550-01
MARKER CIRCUIT

LOCATION					LOCATION					LOCATION				
DESIG.	OS	SD	BAY*	PLATE	DESIG.	OS	SD	BAY*	PLATE	DESIG.	OS	SD	BAY*	PLATE
ONN	182-1, 507-1, 650-1	D284	3	22	9FP	182-1, 507-1, 650-1	B284	3	23	BC $\frac{2}{5}$	128-1, 144-1, 144-2, 187-1, 190-1, 194-1, 195-1, 232-1, 645-1, 686-1	C230-	3	45
1F	219-1	A271	2	6	9NP		E445	3	23	BCA	113-1	A139	2	41
1FA	219-1	A271	2	6	9TLF	118-3	C157	1	8	BG	105-1	E214	2	16
1SE		C443	3	23	10TLF	118-3	C158	1	8	BL	142-1, 142-2	E263	3	26
1TB	182-1, 507-1, 650-1	D282	3	23	11X	128-1, 141-1, 182-1, 647-1	B236	4	2	BN	182-1, 210-1	C307	3	14
2DT2-9	141-1	D234	4	1	20F	118-1, 118-2, 118-3	C125	1	10	BNA	210-1	E248	3	40
2F	219-1	A272	2	6	40F	118-2, 118-3	C127	1	10	BNB	210-1	F333	2	8
2FA	219-1	A273	2	6	A	215-1	C381	3	4	BNTH	145-1, 147-1	H308	3	41
2G	118-2, 118-3	C155	1	8	A $\frac{2}{5}$	164-1, 636-1, 644-1, 645-1	D250-	3	47	BRK1, 2	166-1, 166-2	B407	5	3
2MB	182-1, 507-1, 650-1	C282	3	23	AC $\frac{2}{5}$	128-1, 144-1, 144-2, 187-1, 190-1, 194-1, 195-1, 232-1, 636-1, 645-1, 686-1	A230-	3	44	BRN0-4	142-2, 166-1, 166-2	B403	5	3
2P	110-1, 126-2, 644-1	G117	1	27	AK	215-1	D381	3	4	BRP	166-1, 166-2	C406	5	3
2SA		C442	3	23	ALO-3	143-1, 219-1	D277-	3	17	BRS	142-1, 142-2, 166-1	C406	5	3
2SG	219-1	B275	3	17	AMA	166-2	F269	3	26	BST	146-1	A408	3	13
2TLF	118-3	C150	1	8	AMA1, 2	166-2	F105-	1	33	BSTA		C408		
2-3TLF	118-3	C150	1	8	AMA3	166-2	E295	3	30	BT00-99	141-1	F233	4	4-13
3FB	182-1, 507-1, 650-1	B282	3	23	AMA4, 5	166-2	E226-	2	13	BX	105-1	C399	1	23
3G	118-2, 118-3	C156	1	8	AMB	102-1, 102-2, 102-3, 102-4	D322	2	3	BY	211-1, 214-1	G335	1	8
3NA		A442	3	23	ANR1	210-1, 211-1	E433-	3	13	C $\frac{2}{5}$	164-1, 645-1	B252-	3	48
3TLF	118-3	C151	1	8	AO	110-1	H116	1	27	CAA	142-1, 142-2	E261	3	26
4NE		E443	3	23	AR	218-1	F206	2	21	CB	105-1	C202	2	20
4TLF	118-3	C152	1	8	ARK1, 2	166-1, 166-2	F407	5	2	CB1, 2	105-1	B64-	1	13, 44
4TT	182-1, 507-1, 650-1	D283	3	23	ARN0-5	142-1, 142-2, 166-1, 166-2	F402	5	2	CB3	105-1	B75	1	40
5MT	182-1, 507-1, 650-1	C283	3	23	ARP	166-1, 166-2	F406	5	2	CB4	105-1	B88	1	39
5ST		C444	3	23	ARS	142-1, 142-2, 166-1, 166-2	F406	5	2	CB5	105-1	H173	2	32
5TLF	118-1, 118-3	C153	1	8	ASB	162-1, 653-1	E313	3	11	CB7	105-1	E107	1	32
6FT	182-1, 507-1, 650-1	B283	3	23	AST	146-1	A408	3	13	CBD	105-1	C91	1	35
6NT		E444	3	23	ASTA		C408			CBD1	105-1	F97	1	35
6TLF	118-2, 118-3	C153	1	8	AT0-9	141-1	D233	4	3	CBF	105-1	F96	1	35
7Q	118-3	E121	1	10	AVK	226-1	C221	2	12	CC $\frac{2}{5}$	128-1, 144-1, 144-2, 187-1, 190-1, 194-1, 195-1, 232-1, 645-1, 686-1	F230-	3	45
7RN		E446	3	23	AVK1	226-1	B222	2	12	CCT	124-1, 124-2, 214-1	C44 D182	2	28
7TLF	118-3	C154	1	8	B $\frac{2}{5}$	164-1, 645-1	B251-	3	48	CDK0-1	143-1	F436	1	37
7TP	182-1, 507-1, 650-1	D284	3	23	BC	113-1	A135	2	41	CGT	124-1, 214-1	C183	2	29
8MP	182-1, 507-1, 650-1	C284	3	23						CH0-9	121-1, 214-1, 664-1	B171-	2	33
8SP		C445	3	23						CHA	121-1, 214-1, 664-1	D197	2	25
8TLF	118-3	C156	1	10										
INDEX OF RELAYS, ETC. ON SD'S & OS'S														

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SD-25550-01, ISSUE 27

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DATE	6-26-53	3-2-54					

SD-25550-01

MARKER CIRCUIT (CONTD.)

DESIG.	OS	LOCATION		PLATE
		SD	BAY*	
CHE	121-1, 214-1, 664-1	B197	2	25
CHT	121-1, 214-1	G177	2	31
CKG1-3	105-1	B205-	2	21
CKG4	105-1	C196	2	24
CKG5	105-1	G177	2	31
CKG6,7	105-1	F205-	2	20, 21
CKO	210-1, 215-1	C303	3	14
CKR	215-1	C303	3	14
CL0-5	143-1, 166-1, 166-2	C291-	3	33
CLG	154-1, 165-2	B215	2	17
CLK	154-1	A214	2	16
CLK1-3	166-1, 166-2, 171-1, 171-2, 173-1	C295-	3	33
CLP	143-1, 166-1, 166-2	C297	3	33
CLS	143-1, 166-1, 166-2	C296	3	33
CLT	154-1	E215	2	17
CLT1, 2	154-1	B214	2	17
CN	110-1, 128-1, 129-1, 644-1	G118	1	27
CNC	154-1	E267	3	25
CON	124-1, 124-2, 655-1	D56 E184	2	27
CON(Tube)	124-1, 124-2, 655-1	D55 E181	2	28
CON1, 3	124-1, 124-2, 655-1	E55- E183-	2	27
COX	221-1	C393	1	23
CP0-4	143-1, 166-2, 509-1	H291	3	29
CPK1, 2	166-2, 509-1	H298	3	29
CPP	143-1, 166-2, 509-1	H295	3	29
CPS	143-1, 166-2, 509-1	H295	3	29

DESIG.	LOCATION		BAY*	PLATE
	OS	SD		
CR	130-1, 141-1, 646-1 690-1	H234	3	44
CR0-10	142-1, 142-2, 143-1, 166-1, 166-2	A291-	3	34, 35
CRK1-3	166-1, 166-2, 173-1	A295-	3	34
CRP	142-1, 142-2, 143-1, 166-1, 166-2	A297	3	34
CRR0-2	142-1, 142-2	H260	3	24
CRS	142-1, 142-2, 143-1, 166-1, 166-2	A296	3	34
CS0-29	110-1, 644-1	A113-	1	28-30
CTO-2	110-1, 142-1, 142-2	A112-	1	28-30
CTA0-2	142-1, 142-2, 644-1	B111-	1	28-30
CU $\frac{2}{5}$	110-1, 142-1, 142-2, 636-1, 644-1	G113-	1	27
CV00-99	142-1, 142-2, 230-1	A406	5	4-13
CVS	142-1, 142-2, 230-1	C401	5	3
D	106-1, 647-1	B202	2	21
D $\frac{2}{5}$	164-1, 187-1, 195-1, 645-1	D252-	3	49
DCK	180-1, 180-2, 190-1 194-1	F217	2	15
DCT	123-1, 123-2	F197	2	25
DCT1, 2	226-1, 648-1	D195 F191	2	25
DCT3	226-1, 648-1	B191	2	22
DIS1, 2	108-1, 125-1, 214-1, 221-1, 649-1, 690-1	F206-	2	19, 20
DISA	125-1	C206	2	18
DL	638-1, 638-2	C356	1	13
DL0-13	143-1, 166-1, 166-2	F291-	3	27, 28
DLK1, 2	166-1, 166-2, 171-1, 171-2	F298	3	27, 28

DESIG.	OS	LOCATION		PLATE
		SD	BAY*	
DLP	143-1, 166-1, 166-2	G294	3	27
DLS	143-1, 166-1, 166-2	G294	3	27
DR0-2	142-1, 142-2	H261	3	24
DT1	106-1	B204	2	21
DT2, 3	106-1	E196-	2	23
DTK	121-1, 150-1	A52 A211	2	14
DX $\frac{2}{5}$	164-1	A242	3	18
E $\frac{2}{5}$	164-1, 186-1, 187-1, 195-1, 645-1	D253-	3	49
ECN	144-2, 658-1	F246	3	40
EG	215-1	B382	3	4
EN		A444		
EX7	164-1	A243	3	18
F $\frac{2}{5}$	164-1, 186-1, 187-1, 195-1, 636-1, 645-1	D254-	3	50
FA		C326	2	4
FA1		C326	2	4
FAK	120-1, 610-1	C195	2	24
FB0-19	113-1	D135-	2	44
FBK	120-1, 610-1	C191	2	24
FC-	112-1, 113-1, 143-1, 219-1	A130	C	
FCA-	112-1, 113-1, 143-1	A132	C	
FCG	124-1, 124-2, 655-1	F58 E185	2	27
FCGA	124-1, 124-2, 655-1	F57 G185	2	27

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NO. 5 CROSSBAR

9 SHEETS, SHEET 2

RM 1-2

ORDER AS BSP ITEM MP- 10510

					SD-25550-01 MARKER CIRCUIT (CONTD.)									
DESIG.	OS	LOCATION SD	BAY*	PLATE	DESIG.	OS	LOCATION SD	BAY*	PLATE	DESIG.	OS	LOCATION SD	BAY*	PLATE
FCK	112-1,113-1	C131	2	40	FTK1	110-1,148-1	E88	1	38	GT3-5	124-1	A181-	2	28, 29
FCKA	112-1,113-1	C132	2	40	FTL	148-1	A304	3	15	GTL	105-1	E202	2	20
FG0,1	175-1,183-1,610-1, 651-1	F284-	2	39	FTN0-3	147-1,152-1	A90-	1	46	GTL1	110-1	C89	1	39
FKA	162-1	E317	3	11	FTT0-3	148-1,151-1,152-1, 643-1	G92-	1	35	GTL2-4	105-1,165-2	F102-	1	32, 33
FLG	105-1,146-1	F210	2	16	FTTB	148-1	F91	1	34	CTU	105-1	F100	1	31
FLG1	105-1,146-1	G212	2	16	FU $\frac{2}{5}$	107-1,151-1,152-1, 152-2,505-1,609-1, 643-1	A103-	1	31	GW	219-1	B276	3	17
FLG2	105-1	F181	2	29	FUL	148-1	A305	3	15	GZ	219-1	B277	3	17
FM	219-1	F51 A270	2	6	FUN0-9	147-1,152-1	A92-	1	46	H $\frac{2}{5}$	164-1,186-1,187-1, 195-1	D255-	3	51
FM0-19	113-1	E135-	2	42	FUT0-9	107-1,148-1,151-1, 152-1,152-2,643-1	C92-	1	34	HFA		B326	2	3
FMG	113-1	G132	2	40	G $\frac{2}{5}$	164-1,186-1,187-1, 195-1,636-1,645-1	D255-	3	50	HG $\frac{2}{5}$	109-1,151-1,152-1, 152-2,505-1,609-1, 643-1	A107-	1	32
FMK	113-1	G132	2	40	GB	215-1,242-1	G381	3	4	HGG	109-1,150-1	D75	1	40
FML	113-1	F131	2	40	GBA	161-1	E316	3	11	HGK	109-1,148-1,151-1	B195	2	23
FMP	121-1,214-1	E51 A271	2	6	GBB	161-1	E318	3	11	HGL	148-1	A306	3	15
FN	147-1	F418	2	8	GC	118-1,118-2,118-3, 121-1	B125	1	10	HGL1	148-1	G75	1	40
FNA	147-1	E417	2	8	GK	108-1,646-1	H67	1	42	HGN0-9	147-1,152-1	B70	1	49
FNB	147-1	F333	1	11	GLH	123-1,123-2	D58 E187	2	26	HGR	109-1	G76	1	40
FR	110-1	E87	1	38	GLH1	123-1,123-2	D57 E186	2	26	HGT0-9	109-1,148-1,151-1, 152-1,152-2,643-1	E71-	1	41
FS0-19	113-1,651-1	D135-	2	43	GOS	162-1,653-1	C311	3	12	HMC	123-1,123-2	E197	2	23
FSA	105-1,143-1	H132	2	41	GP1-3	219-1	B276-	3	17	HMS	123-1,123-2	G196	2	23
FT0-3	107-1,151-1,152-1, 152-2,505-1,609-1, 636-1,643-1	B101-	1	31	GPA	219-1	F277	3	17	HMS1	123-1,123-2,656-1	C198	2	23
FTB0-3	107-1,148-1,151-1, 152-1,152-2,643-1	C120-	1	10	GPB	219-1	G277	2	17	HMT	123-1,123-2	F196	2	32
FTC0-19	113-1,651-1	C135-	2	45	GS1-5	219-1	B261-	3	39	HMT1	123-1,123-2	F196	2	24
FTCK	113-1,651-1,661-1	E133	2	41	GSA1-4		G401	5	4-7	HN $\frac{2}{5}$	144-1,144-2,175-1, 184-1,184-2,184-3, 610-1,658-1	B247-	3	42
FTCK1	113-1,651-1,661-1	F132	2	41	GT	124-1,655-1	B184	2	27	HTK	109-1	G77	1	40
FTK	110-1	E86	1	38	GT1,2	124-1,124-2	D57- E184-	2	28	HTK1	109-1,148-1	C74	1	40
										HTR	142-1,142-2,218-1	B58 B186	2	26

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BELL TELEPHONE LABORATORIES, INC.

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ISSUE 4 ANC 5 BAY 1
DATE 6-26-53 3-2-54

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SD-25550-01
MARKER CIRCUIT (CONTD.)

DESIG.	OS	LOCATION SD	BAY*	PLATE
HTT	218-1	G352	1	11
HTT(Tube)	218-1	H353	1	11
HTUK	147-1	G307	3	15
IMG	143-1	G321	1	11
IMT	641-1	G323	1	11
INC	182-1.647-1	D238	3	46
INCO	647-1	A46	3	46
IRT		A416	2	16
ITA	219-1	D272	1	25
ITR1	106-1	D272	2	5
ITR2	106-1	E192	2	22
ITR3	106-1	A212	2	17
J $\frac{2}{5}$	164-1.186-1.187-1	D256-	3	51
JB	214-1	F343	M	
JCK0.1	119-1.119-2.119-3. 119-4	D179-	2	31, 33
JG0-4	118-1.118-2.118-3	F124-	1	9
JLE	117-1	G155	1	6
JLO	117-1	G156	1	6
JSE	117-1	G157	1	6
JSO	117-1	G157	1	6
JSQ0-5	117-1.642-1	G150-	1	7
JT	123-1.123-2.656-1	G197	2	25
K $\frac{2}{5}$	164-1.187-1	D257-	3	52
KA	164-1	C250	3	47
KBC	164-1	C252	3	48
KCM	142-1.142-2	A411	5	3
KCV	142-1.142-2	A411	5	3
KDE	164-1	C253	3	49
KFG	164-1	C255	3	50
KG	164-1	C254	3	47
KGS1,2	164-1	E287-	3	42

DESIG.	OS	LOCATION SD	BAY*	PLATE
KHJ	164-1	C256	3	51
KK	154-1	C251	3	47
KKL	164-1	C258	3	52
L $\frac{2}{5}$	164-1.187-1	D258-	3	52
LB	123-1.211-1.214-1. 664-1	B187	2	26
LBO-9	121-1.123-1.123-2	A171-	2	30
LBT	123-1.148-1.211-1. 214-1	C186	2	27
LCH	149-1	E416	2	7
LCE	120-1	C196	2	23
LDT	218-1	H47	1	13
LDT(Tube)	218-1	C357	1	12
LE	117-1	F81	1	37
LF0-9	214-1.664-1	C344-	M	
LFK	144-1.148-1.151-1	H202	2	19
LGT	124-1.655-1	C181	2	29
LHT	123-1.123-2	D58 C187	2	26
LI	149-1	E333	2	7
LIN	210-1	F331	2	7
LK	119-1.119-2.119-3. 119-4.120-1	B199-	2	23
LK1,2	214-1.226-1.648-1	E195 G191	2	22, 25
LL $\frac{2}{5}$	121-1.151-1	G171-	2	32
LLB	114-1	C271	2	5
LLC1,2	105-1	G202	2	19
LLI	148-1.210-1.215-1	B305	3	15
LNT		F343	M	
LOD	117-1	F82	1	37
LOT	105-1	A210	2	14
LO11	150-1	A211	2	14
LP		F411	1	11
LPA	142-1.142-2.182-1	F237 H231	3	46
LPB	142-1.142-2.182-1	F237 H231	3	46

DESIG.	OS	LOCATION SD	BAY*	PLATE
LR	180-1.180-2.190-1.194-1. 195-1	F218	2	15
LTA	142-1.142-2.182-1	F237 H232	3	46
LTB	142-1.142-2.182-1	F237 H232	3	46
LTR	123-1.123-2	D58 A187	2	27
LXP	123-1.123-2.148-1.217-1. 217-2.656-1	C197	2	25
LXP1	121-1	C196	2	24
MO.1	214-1.664-1	D347	M	
M2,3	214.664-1	E347	M	
M4,5	214-1.664-1	F347	M	
M6,7	214-1.664-1	G347	M	
M8,9	214-1.664-1	H347	M	
MAK	102-1.102-2.102-3.102-4	C322	2	4
MAK1	113-1	C53 G217	2	14
MAN	110-1.128-1.644-1	G117	1	27
MB	102-1.102-2.102-3.102-4. 231-1.634-1	D325	2	4
MBO-4	166-2	D291-	3	31
MBK 1-5	166-2.510.1.640-2	D295-	3	30
MBJ	166-2	D294	3	31
MBS	166-2	D294	3	31
MBS0-9	142-2	C265-	3	32
MCB1	102-1.102-2.102-3.102-4. 218-1	C321	2	3
MCB2-6	102-1.102-2.102-3.102-4. 218-1	F322	2	3
MCK	102-1.102-2.102-3.102-4	B323	2	4
MCN	110-1.128-1.644-1	G116	1	27
MDK	113-1	H204	2	18
MF	106-1.647-1	B203	2	21
MLF	106-1.636-1.647-1	B202	2	21
MN	214-1.664-1	E347	M	

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DESIG. OS LOCATION SD BAY* PLATE					DESIG. OS LOCATION SD BAY* PLATE					DESIG. OS LOCATION SD BAY* PLATE				
MN1	214-1,664-1	D347	M		NCNC	130-1,142-1,142-2	E263	3	25	OC	106-1	E207	2	19
MON	608-1	A413	1	14	NCS		G365	M		OC1,2	106-1,220-1,647-1	E206-	2	19,21
MON1	608-1	B413	1	14	NCSA		G365	M		OCN	144-2,658-1	G246	3	40
MPT	214-1,664-1	A346	M		ND1	143-1,164-1,645-1	B217	2	15	OFH	149-1	E335	2	8
MRL	218-1	D352	1	11	NDK	164-1,171-1,171-2, 645-1	B217	2	15	OFH1	125-1	E336	2	7
MRL1	218-1	D351	1	11	NE	144-1,144-2,210-1	G244	3	43	OFK	215-1	A381	3	4
MSK	102-1,102-2,102-3, 102-4	C324	2	4	NGB	146-1	H271	2	5	OGC	161-1	E222	2	12
MT	641-1	A351	1	14	NGC	146-1,148-1,215-1	G302	3	16	ONW	105-1	F202	2	19
MT1	641-1	A356	1	14	NGK	146-1	E307	3	13	ONX	105-1	C394	1	23
MT2	641-1	A312	3	12	NGK1	146-1	G306	3	13	OPE	142-1,219-1	B241	3	18
MT3,4	641-1,651-1	A133-	2	41	NGP	146-1,219-1	H271	2	6	OPR	142-1,142-2	E263	3	26
MT3A,4A	641-1,651-1	A137-	2	39	NGP1	146-1,219-1	B227	1	4	OPS0-3	142-1,142-2	C263	3	24
MT5,6	641-1,652-1	D140-	2	52	NH	214-1,664-1	G342	M		OR	106-1,232-1,647-1	D236	3	46
MT7	641-1,654-1	B161	1	4	NOB	510-1	D297	3	30	ORK1,2	164-1	C252	3	47
MT8	641-1,642-1	G155	1	6	NOC	154-1	A214	2	16	ORO,A-D	106-1,647-1	B46-	TCS	
MT9	641-1,651-1	D133	2	40	NR	148-1,210-1	F239	3	46	ORT		B415	2	15
MT10	641-1,668-1	G388	3	4	NS	143-1	A227-	1	4	OSO-4	162-1,653-1	B312-	3	12
MT11	641-1	F87	1	38	NSI	143-1	B216	2	16	OSA0-9	143-1,161-1,219-1, 636-1,653-1	H316	3	9
MT12-14	641-1	G351-	1	11,14	NSO	143-1,219-1	A229-	2	16	OSC	161-1	D314	3	10
MT15	641-1	F98	1	35	NT	214-1,664-1	E344	M		OSE	162-1,653-1	E311	3	12
MT16,17	641-1	A342-	M		NT1-5	214-1,664-1	A343-	M		OSG0-9	143-1,161-1,219-1, 636-1,653-1	G317	3	10
MT18	641-1	G190	2	22	NTC	214-1,664-1	C342	M		OSK	162-1,226-1,653-1	D311	3	12
MT19,20	641-1	A389-	3	3	NTH	214-1,664-1	F343	M		OST	165-1,165-2	B223	2	12
MXT	113-1,117-1,210-1, 241-1	C392	1	23	NTR	214-1,664-1	F342	M		OST1,2	165-1,165-2	C223-	2	12
					NTT	214-1,664-1	E342	M		OTT	652-1	B218	2	15
N1-4	144-1,144-2	F240-	3	43						OV	149-1,214-1,219-1	G335	2	8
N1A-4A	144-1,144-2	F243-	3	43	OA	144-1,182-1,647-1	B238	4	2					
NAR1-3	241-1	F431-	3	13	OAN	145-1,241-1	A41	3	40	PO-9	118-2,118-3	D161-	1	5
NC		F362	M				A245			PA	118-2,118-3	E161	1	4
NC1-4		B365-	M		OAT	218-1,634-1	D353	1	11	PB	118-3	F161	1	4
NCA		A362	M		OAT(Tube)	218-1	D352	1	12	PBN	147-1	B383	3	4
NCCN	142-1,142-2	E264	3	25	OAT1	218-1	D353	1	14	PBX1	214-1,215-1	E303	3	14
NCF		A364	M		OB	144-1,182-1,647-1	A41	4	2	PBX2	214-1,215-1	D380	3	4
NCK		G363					B238			PBXA,B	124-1,655-1	A180-	2	29
NCL		F365	M		OBN	145-1,241-1	A246	3	40	PBY	142-1,142-2	E262	3	26
					OBS	510-1	D297	3	30					
					OBS1,2	217-2	B52 C210	2	14					

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BELL TELEPHONE LABORATORIES, INC.

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MP-10510

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ISSUE 15 2/24/54
DATE 3-2-54

SD-25550-01
MARKER CIRCUIT (CONTD.)

DESIG.	OS	LOCATION SD	BAY*	PLATE
PC	118-3	G161	1	4
PC0-19	142-1, 142-2	G269	3	37, 38
PCCL	165-1, 165-2	C286	3	36
PCD0,1	182-1, 647-1, 662-1	A288	3	45
PCL1	106-1	C288	3	36
PCL2,3	106-1	C287	2	11
PCN	142-1, 142-2	E266	3	25
PCN0,2,3,5	166-1, 166-2	D287-	3	36
PCR	182-1, 647-1, 662-1	E286	3	43
PD	133-1, 141-1, 646-1, 690-1	H236	3	44
PEG	224-1	F195	2	24
PHC	144-1, 182-1	E281	3	23
PK	133-1, 141-1, 646-1, 690-1	H236	3	44
PL	224-1	G176	2	31
PMO	147-1, 182-1, 210-1, 219-1	B383	3	3
PN	147-1, 182-1, 636-1	D281	3	23
PNC	142-1, 142-2	E265	3	25
PNR	118-1, 118-2, 118-3	D161	1	4
PPX	142-1, 142-2	E265	3	25
PR	118-1, 118-2, 118-3	G129	1	9
PS	133-1, 141-1, 636-1, 646-1, 690-1	H235	3	44
PSA		D408	C	0
PSA0-1	142-1	F408	C	0, 1
PSB		D408	C	1
PSB0-1	142-1	G408	C	0, 1
PSR	221-1, 646-1	H235	3	44
PT0-9(Tube)	214-1, 664-1	A347-	M	
PTC	118-2, 118-3	A169	1	3
PTK	147-1, 182-1	D217	2	15
PTL(Tube)	214-1, 664-1	A346	M	
PTN	147-1, 182-1	C281	3	22
PU	124-1, 655-1	B184	2	29
PU1	124-1, 210-1	A302	3	15
PUL	124-1, 210-1	C305	3	14
R-	112-1, 130-1, 142-1, 142-2, 219-1, 230-1	C260-	4	48-57
RA1-6	143-1, 219-1	A261-	3	29

DESIG.	OS	LOCATION SD	BAY*	PLATE
RAV1,2	211-1, 219-1, 661-1	G52 A274-	2	6
RBT	219-1, 649-1,	B271	2	6
RCCX	608-1, 638-1, 638-2	B356	1	13
RCK1	149-1-201-1, 659-1	D332	2	8
RCK2	149-1	D334	2	7
RCK3	149-1	A213	2	17
RCL	148-1, 214-1	A308	3	15
RCLA	148-1, 214-1	A226	3	6
RCN1-15	147-1	A339	1	45
RCT	124-1, 124-2	D56 E184	2	28
RCT1-15	148-1, 214-1, 660-1	B331-	2	9, 10
RCTA, B	124-1, 124-2	G58 D186-	2	26, 27
RCY	219-1	H52 C273	2	5
RCY1	219-1	B205	2	21
RCY2-4	211-1	G300-	3	16
RD	112-1, 116-1	B51		
RF	219-1	F52 A274	2	6
RFA	219-1	F52 A273	2	6
RGT0,1	142-1, 142-2	A268	3	25, 26
RGTA	147-1, 215-1	B302	3	13
RI	182-1, 210-1	C306	3	14
RIA	210-1	F248 G426	3	40
RIB	210-1	G334	2	8
RK	119-1, 119-2, 119-3, 119-4, 120-1	B194	2	23
RK1-3	111-1	D203-	2	20
RLG	130-1	H267	3	24
RMF	112-1	C32 B50		
RN	165-2, 507-1	B284	3	22
RN $\frac{2}{5}$	507-1	B285	3	22
RNG	148-1	C304	3	14
RNK1,2	165-1, 165-2	A285	3	22
RNT	165-1, 165-2	F227	2	13

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DESIG.	OS	LOCATION SD	BAY*	PLATE
RNT1,2	165-1, 165-2	F227-	2	13
RO	176-1, 182-1, 647-1	D238	3	46
ROA	142-1, 142-2, 219-1, 230-1, 238-1	G272	2	5
RON	631-1, 631-2	A356	1	13
RP	126-2, 690-1	A278 D279	3	26
RPK	166-2	F268	3	26
RQ	118-2, 118-3	E122	1	10
RR	130-1, 142-1, 142-2	H267	3	24
RRC	130-1	H267	3	24
RRK	130-1, 646-1	H268	3	24
RS0-9	149-1, 657-1	G336-	2	9
RSC	165-1, 165-2	F222	2	12
RSK	149-1, 657-1	E334	2	7
RT0-4	142-1, 142-2, 682-1	H263	3	36
RTC	142-1, 142-2, 682-1	G262	3	36
RTST	608-1	E414	2	16
RV	211-1	E261	3	26
RV1,2	211-1	E210-	2	14
RV3	143-1, 211-1	G211	2	14
RYC	105-1	C213	2	15
RYT	218-1, 227-1	E357	1	13
RYT1	218-1	E356	1	13
S00-44)	142-1, 142-2	G265	C	
S100-144)		G265	C	
SiK	149-1, 154-1, 163-1, 659-1	B213	2	16
SA0-9	215-1, 668-1	F383-	3	5
SAE	215-1	F380	3	3
SBO-9(MD)		A368-	M	
SCB	105-1	E191	2	25
SCB1,2	105-1	D216-	2	15
SCBA0-3	161-1	H313	3	9
SCBB0-3	161-1	G313	3	9
SCC	166-2	D297	3	30

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DESIG.	OS	LOCATION SD	BAY*	PLATE
SCX	130-1,130-2,141-1, 646-1,690-1	H234	3	44
SCN	130-1,141-1,646-1, 690-1	H233	3	44
SCR	215-1	D382	3	4
SCT	608-1	A418	2	11
SDT	218-1	B358	1	13
SDT(Tube)	218-1	E357	1	12
SE	117-1	F83	1	37
SF	214-1,218-1,227-1	G45 G49	1	13
SF(Tube)	218-1	H48	1	12
SFR	214-1	E341	M	
SFT	218-1	G45 G49	1	13
SIA	161-1,653-1	E316	3	11
SIB	161-1,653-1	E317	3	11
SKA	161-1	D316	3	11
SKA1	161-1	A227	3	6
SKB	161-1	D318	3	11
SKB1	161-1	A228	3	6
SL	123-1,123-2,656-1	F197	2	25
SL0-9	215-1,668-1	D383-	3	6
SLC	215-1	C385	3	5
SLCK	215-1	D381	3	4
SLCK1	215-1	G303	3	15
SLK	163-1,175-1,201-1, 662-1,670-1,674-1	E220	2	12
SLK1,2	163-1,226-1	B220-	2	12
SNG1,2	146-1,215-1	E304-	3	14
SNK	105-1	G53 E273	2	5
SO	117-1	F83	1	37
SOG1	106-1	D271	2	5
SOG2	106-1	D191	2	22
SOG3	106-1	E212	2	17
SON	161-1,606-1	E312	3	11
SP	210-1,221-1,649-1	C391	1	23
SPC	214-1,632-1	G343	M	

DESIG.	OS	LOCATION SD	BAY*	PLATE
SPH	214-1,664-1	G343	M	
SPL	182-1,214-1,632-1, 664-1	G341	M	
SPL1	182-1,214-1,632-1, 664-1	F341	M	
SPLC	214-1	D340	M	
SPT	215-1	F302	3	13
SQ0-9	117-1	C80-	1	36
SQA	117-1	E202	2	19
SQA1	117-1	E203	2	19
SQT0,1	117-1	D80	1	37
SRK	149-1	D333	2	7
SSA	163-1,653-1	C318	3	12
SSB	163-1,653-1	A316	3	12
ST7	126-1,126-2,164-1, 186-1,187-1,195-1, 645-1	C252	3	47
STF	118-1,118-2,118-3	G128	1	9
STP	121-1,214-1	F158	1	7
STP1-3	118-1,118-2-121-1, 654-1	D159-	1	6,7
STX	105-1	C393	1	23
SW	161-1	E314	3	11
SZ	161-1	E315	3	11
T $\frac{2}{5}$	144-1,144-2,175-1, 184-1,184-2,184-3, 610-1,658-1	B248- C425	3	41
TA0-9		F233	4	3
TAL	218-1	B328	2	4
TAN	182-1,232-1,647-1, 685-1	D237	3	46
TANOA-D	182-1,647-1,685-1	A47	TCS	
TAN1A-D	182-1,647-1,685-1	D47	TCS	
TAN2A-D	182-1,647-1,685-1	D47	TCS	
TAN3A-D	182-1,647-1,685-1	D47	TCS	
TAN4A-D	182-1,647-1,685-1	D47	TCS	
TB0-5	112-1,116-1,143-1, 219-1	A267	2	37,38
TBH	210-1	D335	2	8
TBI	210-1	C305	3	14
TBIA	210-1	F247 G424	3	40
TBIB	210-1	F334	2	8

DESIG.	OS	LOCATION SD	BAY*	PLATE
TBK	116-1	C53 G217	2	14
TBT	219-1	D130	2	40
TBTA,B	219-1	C131-	2	40
TBW	145-1,147-1,636-1	G308	3	14
TC	149-1,154-1,206-1, 216-1,659-1	E266	3	25
TC5-7	128-1,141-1,182-1, 647-1,685-1	B234-	4	2
TCCN	142-1,142-2	E264	3	25
TCH	149-1	G331	2	7
TCH0-9	118-1,118-2,118-3, 654-1	G162-	1	3
TCHK	118-1,118-2,118-3, 654-1	B195	2	23
TCK	149-1,154-1,659-1	D331	2	8
TCNC	142-1,142-2	E264	3	25
TEA	219-1	G273	2	5
TER1	106-1	E273	2	5
TER2	106-1	G192	2	22
TER3	106-1	C212	2	17
TER4	106-1	G191	2	22
TF $\frac{2}{5}$	175-1,183-1,610-1, 651-1	G282-	2	39
TFK1,2	113-1	G133-	2	41
TFK3	113-1,214-1	E217	2	17
TG	125-1	D224	2	11
TG0-19	112-1,116-1,143-1, 219-1	A266	2	37,38
TGS1,2	165-1,165-2	C298-	3	31,34
TGS3	165-1,165-2	D401	5	3
TCT	125-1	A224	2	11
TH $\frac{2}{5}$	144-1,144-2	B246- C422-	3	42
THC	144-1,182-1,647-1	E281	3	23
TIN	210-1	F331	2	7
TJ0-9	119-1,119-2,119-3, 119-4,121-1	E171-	2	35
TK	121-1	B197	2	24
TLC1-3	105-1	F203-	2	18
TLL0-9	121-1	E171-	2	35
TM	105-1,218-1,634-1	D325	2	4

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RM 1-2

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NO. 5 CROSSBAR

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BELL TELEPHONE LABORATORIES, INC.

ORDER AS BSP ITEM MP- 10510

PRINTED IN U.S.A.

ISSUE 41ANC 15 8-2-54
DATE 6-26-53 3-2-54

9 SHEETS, SHEET 7

MP-10510

DESIG.	OS	LOCATION		PLATE
		SD	BAY*	
TMK	225-1	F190	2	23
TMS	218-1	E357	1	13
TN	147-1, 182-1	C281	3	22
TNK	147-1	B334	2	9
TNR	219-1	G229 B227	1	4
TOA	142-1, 142-2, 143-1, 219-1	F272	2	5
TOG1	106-1	E271	2	5
TOG2	106-1	B192	2	22
TOG3	106-1	D212	2	17
TOL	182-1, 232-1, 647-1	D237	3	46
TOLOA-D	182-1, 647-1	A48-	TCS	
TOL1	219-1	F229	3	46
TOS	142-1, 142-2	C264	3	26
TP	126-2, 690-1	A278 D278	3	25
TPK	154-1, 166-2, 216-1	E267	3	25
TR1	221-1, 649-1	D354	1	14
TR1A	214-1, 215-1	F306	3	13
TR2	220-1, 646-1	C208	2	20
TR2A	214-1, 215-1	F306	3	13
TR2B	220-1, 646-1	F178	2	31
TR2C	220-1, 646-1	C183	2	29
TR2D	220-1, 646-1	H65	1	42
TR2E	220-1, 646-1	D207	2	20
TR2F	220-1, 646-1	B53 B211	2	14
TRA	218-1	B327	2	4
TRB	221-1	G354	1	14
TRL	221-1	D208	2	20
TRL1	221-1, 649-1	A354	1	13
TRLA	221-1	D207	2	20
TRN	144-2, 658-1	G246	3	40
TRN1	144-2, 658-1	G245	3	40
TRR	125-1, 221-1, 649-1	D350	1	14
TRS	221-1, 646-1	F207	2	19
TRSA	221-1	G356	1	14
TRST	221-1	G355	1	13
TRT	218-1, 221-1	D357	1	13
TRTR	218-1	G356	1	14
TRTR(Tube)	218-1	D357	1	12
TS0-19	116-1, 636-1, 652-1	F140-	2	50, 51

SD-25550-01
MARKER CIRCUIT (CONTD.)

DESIG.	OS	LOCATION		PLATE
		SD	BAY*	
TSE1-3	116-1, 641-1, 652-1	D141-	2	51, 52
TST	190-1, 194-1, 195-1	G355	1	13
TT0-19	112-1, 116-1, 652-1	C140-	2	53
TTK	652-1, 670-1, 674-1	B219	2	15
TTL0-9	120-1, 121-1	B171-	2	35
TVA	166-2	D296	3	30
TWT0-2	143-1	G311	3	9
TX		A399	1	20
TXC1-9	142-1	E244	3	18
TXD	142-1	A241	3	18
TYM	215-1	B380	3	4
TYM1	215-1	F430	3	13
U $\frac{2}{5}$	144-1, 144-2, 175-1, 184-1, 184-2, 184-3, 187-1, 190-1, 194-1, 610-1, 658-1	B248- C427-	3	41
UC	145-1, 215-1, 242-1	G305	3	13
UK	147-1	G308	3	22
UT	215-1	E382	3	4
VF0-4	110-1, 151-1, 152-1, 152-2, 505-1, 609-1, 643-1	A108-	1	32
VFG	110-1	B87	1	39
VFL	148-1	A307	3	15
VFL1	148-1	D86	1	39
VFN0-4	147-1, 152-1	G89	1	48
VFT0-4	110-1, 148-1, 151-1, 152-1, 152-2, 643-1	C86-	1	39
VG $\frac{2}{6}$	108-1, 151-1, 152-1, 152-2, 505-1, 609-1, 643-1	A105-	1	33
VGG1, 2	108-1	C64-	1	43, 44
VGL	148-1	A306	3	15
VGL1, 2	148-1	G64-	1	43, 44
VGN0-13	147-1, 152-1	A60	1	48
VGR	108-1	H67	1	42
VGT0-13	108-1, 148-1, 151-1, 152-1, 152-2, 643-1	E60-	1	43, 44
VP	142-1, 142-2	E262	3	26
VTK	108-1	G68	1	42
VTK1	108-1, 148-1	D68	1	42

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DESIG.	OS	LOCATION		PLATE
		SD	BAY*	
WT	218-1	G48 E357	1	13
WT(Tube)	218-1	E357	1	12
X11	128-1, 141-1, 182-1, 647-1, 690-1	B237	4	2
XAB	120-1, 610-1	D395	1	22
XACH	119-1, 119-2, 119-3, 119-4, 120-1, 121-1	C378	1	25
XACL	143-1	G395	1	21
XACP	143-1, 166-2, 509-1	G396	1	21
XACR	143-1	G394	1	21
XADL	143-1	G396	1	21
XAF	119-2, 119-4	D398	1	22
XAFT	113-1, 651-1	C373	1	25
XAHG	109-1, 148-1, 151-1	C372	1	25
XAJC	119-1, 119-2, 119-3, 119-4	D397	1	21
XAJG	118-1, 118-2, 118-3	D396	1	21
XAJS	119-1, 119-2, 119-3, 119-4, 123-1, 123-2	D396	1	21
XALC	120-1	D398	1	21
XALG	110-1, 148-1, 151-1	C372	1	25
XALR	119-1, 119-2, 119-3, 119-4, 120-1	D397	1	21
XALV	120-1	C373	1	25
XAMB	166-2	G395	1	21
XAPTN	118-2, 118-3	G393	1	21
XARS	149-1	G371	1	25
XATS	120-1, 123-1, 123-2	D394	1	21
XAVGA	108-1	C371	1	25
XARN	142-1, 142-2, 166-1, 166-2	E399	1	20
XAVGB	108-1, 148-1, 151-1	C371	1	25
XBRN	142-1, 142-2, 166-1, 166-2	E399	1	20
XBT	131-1, 186-1, 187-1, 190-1, 194-1, 195-1, 220-1	G374	1	26
XCH	119-1, 119-2, 119-3, 119-4, 120-1, 121-1	B378	1	24

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SD-25550-01
MARKER CIRCUIT (CONTD.)

DESIG.	OS	LOCATION SD	BAY*	PLATE
XCKR	154-1	G376	1	26
XCL	143-1, 166-1, 166-2	G395	1	19
XCLC	106-1, 176-1, 182-1, 232-1, 647-1, 662-1, 685-1	G399	1	22
XCP	143-1, 166-2, 509-1	G396	1	19
XCR	142-1, 142-2, 143-1, 166-1, 166-2	G394	1	19
XCS	110-1, 644-1	G398	1	22
XDL	143-1, 166-1, 166-2	G396	1	19
XF	119-2, 119-4	C398	1	20
XFG	183-1	G372	1	26
XFT	113-1, 651-1	B374	1	24
XFTN	148-1	F392	1	19
XFTT	148-1	G392	1	22
XFUN	148-1	F391	1	19
XFUT	148-1	G391	1	22
XHG	109-1, 148-1, 151-1	B372	1	24
XJC	119-1, 119-2, 119-3, 119-4	C396	1	19
XJG	118-1, 118-2, 118-3	C396	1	19
XJS	119-1, 119-2, 119-3, 119-4, 123-1, 123-2	C395	1	19
XLC	120-1, 656-1	C397	1	19
XLG	110-1, 148-1, 151-1	B372	1	24
XLH	123-1, 123-2	A398	1	20
XLO	150-1	C376	1	26
XLR	119-1, 119-2, 119-3, 119-4, 120-1	C397	1	19
XLS	123-1, 123-2, 214-1	C375	1	25
XLV	120-1	B373	1	24
XMB	143-1, 166-2	G395	1	19
XMRL	131-1, 186-1, 187-1, 190-1, 194-1, 195-1, 220-1	G375	1	26
XN	210-1, 241-1	C377	1	26
XOB	217-2, 510-1	G393	1	22
XPG	118-1, 118-2, 118-3	G392	1	22
XPT	182-1, 507-1, 650-1	D395	1	22
XPTN	118-2, 118-3	G393	1	19
XRCT	148-1	G391	1	22
XRL	131-1	G377	1	26
XRS1-4	149-1, 657-1	F371-	1	24, 25

DESIG.	OS	LOCATION SD	BAY*	PLATE
XS	162-1	G374	1	25
XSA	162-1, 507-1	C374	1	25
XSL	123-1, 123-2	G377	1	26
XSS	163-1	G378	1	25
XT	128-1, 141-1, 144-1, 182-1, 647-1, 685-1, 690-1	G398	1	22
XT1, 2	166-1, 166-2, 509-1, 614-1	F373-	1	24
XT5	166-1, 166-2	G373	1	26
XTAN	182-1, 647-1	G399	1	19
XTB	112-1, 116-1, 143-1, 219-1	G397	1	22
XTB1	116-1	C375	1	25
XTC	103-1	G376	1	26
XTC1	103-1	G376	1	26
XTG	112-1, 116-1, 143-1, 219-1	G397	1	22
XTG1	112-1, 116-1, 652-1	C377	1	26
XTRK	106-1, 108-1, 220-1, 646-1	G374	1	26
XTRL	220-1	G375	1	26
XTS	120-1, 123-1, 123-2	C394	1	19
XTS1	120-1, 123-1, 123-2	G373	1	26
XTV	166-2	G394	1	22
XVGA	108-1, 643-1	B371	1	24
XVGB	108-1, 148-1, 151-1	B371	1	24

*NOTES:

BAY 1 IS COMMON EQUIPMENT BAY, LEFT.
BAY 2 IS COMMON EQUIPMENT BAY, RIGHT.
BAY 3 IS TRANSLATOR AND ROUTE RELAY BAY, LEFT.
BAY 4 IS TRANSLATOR AND ROUTE RELAY BAY, RIGHT.
BAY 5 IS CODE CONVERSION AND ROUTE RELAY BAY.
BAY C COVERS TRUNK FRAME TEST LEAD BAY AND
CLASS OF SERVICE RELAY BAY.
BAY M - MISCELLANEOUS RELAY RACK.
BAY TCS - TANDEM CODE SCREENING BAY.

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ISSUE 3
DATE 3-29-52
A.K.
ANC 4
ANC 1

SD - 25556 - 01
NUMBER GROUP AND
CONNECTOR CIRCUIT

DESIG.	OS	LOCATION	SD
A-	215-1		A35 E41
ABT			F43
AN			E43
B--	215-1		D43
CH	115-1		G34
E-	145-1, 146-1		H31
FN	147-1		A32
HB0-9	145-1, 147-1, 215-1		C33
MB0-1	146-1		G36
MCA-C	146-1, 215-1		E31-
MP-	145-1, 146-1		F31
NCK			A37
OF			A31
POF	215-1		C38
SA--	215-1		A43
SC-	147-1, 215-1		C37
SCK	215-1		C41
TB00-99	145-1, 147-1		A34
TBA-	215-1		A42
TBT--	215-1		A44
TN	147-1		C38
TR	115-1		G33
TR0-3	115-1		G35
U0-9	145-1, 147-1, 215-1		C35 F41
XSC	215-1		C41

SD - 25565 - 01
TANDEM R.P.
INCOMING REGISTER

DESIG.	OS	LOCATION	SD
6D	195-1		H34
CC	195-1		G59
CG0-3	195-1		G62
CGC0-3			A66
CGS	195-1		G64
DCK	180-2		B34
F(Hold Mag.)	183-1, 195-1		B54
FB(Hold Mag.)	195-1		B53
FG0	183-1		H60
FG1	183-1		H61
FT(Hold Mag.)	195-1		B53
FU(Hold Mag.)	195-1		B54
FU1	195-1		B55
GR	195-1		D41
H	180-2		A32
HM	183-1, 195-1		A42
IB(Hold Mag.)	195-1		B51
IB1	195-1		E37
IG(Hold Mag.)	195-1		B52
L	195-1		B41
LA-E	195-1		C42
LR	195-1		B37
LR(Tube)	195-1		A32
LT0-9	184-3		A61-
LU0-9	184-3		C60-
M	607-1		G32
MB	195-1, 607-1		F32
MRL	195-1, 220-1		E34
NTAN	182-1		E61
NTS	182-1		E61
OB	195-1		A51

SD - 25565 - 01 (CONTD.)
TANDEM R.P.
INCOMING REGISTER

DESIG.	OS	LOCATION	SD
OBS	195-1		E64
OD	195-1		G41
OD1			G41
OG(Hold Mag.)	195-1		B56
OGS(Hold Mag.)	195-1		B57
ON	180-2		D33
ON1	195-1		D34
OVL	132-1, 195-1		A34
P1-6	195-1		B44-
PA1-3	195-1		G34-
RA1, 2	183-1, 195-1		A41-
RB	180-2		D32
REG	184-3		A60
RLK	195-1		C32
RR	195-1		C33
RV	195-1		G43
RV1-5	195-1		E36-
S	195-1		G42
S1, 2	195-1		F42
SEL0-9(Se1)	183-1, 195-1		C51-
SM	183-1, 195-1		A43
SP	195-1		G42
STP	195-1		D41
SUP	184-3		A61
TAN	182-1		E60
TC1, 2	195-1		F34-
TM	195-1		F31
TM(Tube)	195-1		A34
TMA	195-1		A35
TRL	195-1, 220-1		F33
TT	195-1		D36
TTA	195-1		D34
TTB	195-1		D35

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SD - 25565 - 01, ISSUE 3

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SD-25568-01

PRETRANSLATOR CIRCUIT

DESIG.	OS	LOCATION	SD	DESIG.	OS	LOCATION	SD	DESIG.	OS	LOCATION	SD
11X	136-1, 137-1, 647-1, 663-1		A23	CZO, 1	137-1		B36-	SW1	137-1		F26
AC $\frac{2}{5}$	136-1		A20-	CZ2-9	137-1		B35	TM	139-1, 634-1		G34
BO, 1	137-1		B38	CZC	137-1		B34	TR	138-1, 139-1		G37
B2-9	137-1		G23	DL	140-1, 638-1, 638-2		H35	TR2	140-1, 646-1, 663-1		G35
BAO, 1	137-1		B39	FA	134-1		F31	TRA	139-1		F31
BA2-9	137-1		F23	FA1	134-1		F30	TRB	140-1		G36
BC $\frac{2}{5}$	136-1		G20-	FA2	134-1		G31	TRBA	140-1		E35
BS	137-1		E26	HD	138-1, 663-1		H26	TRB1	140-1		H35
CC $\frac{2}{5}$	136-1		C30-	HDK	134-1, 663-1		H25	TRL	140-1		E35
CCM	137-1, 663-1		G26	KTR	137-1, 663-1		F27	TRS	135-1, 646-1, 663-1		E35
CM3	137-1		E27	LCM	137-1, 663-1		F27	TRST	139-1		G34
CMA-C	137-1		E29	LSD	137-1, 663-1		G27	TRTR	139-1		E37
CR	137-1		D20	LT	136-1, 137-1, 647-1, 663-1		B23	TRTR(Tube)	139-1		G36
CS	137-1		D21	MB	134-1, 634-1		G30	WT	139-1		E34
CSD	137-1, 663-1		G26	PC	134-1		G32	WT(Tube)	139-1		G33
CT	137-1		D22	PCK	138-1, 663-1		G27	XR	137-1		G26
CU	137-1		D25	PRL	138-1		E26	XRL	138-1, 663-1		H26
CUA	137-1		B25	PS	134-1		G32	XT	137-1, 140-1, 663-1		G26
CV	137-1		D26	PW	137-1		E25				
CVA	137-1		B26	PW1	137-1		E26				
CW	137-1		D27								
CWA	137-1		B27	RCCK	140-1, 638-1, 638-2		H37				
				RLK	138-1, 663-1, 665-1		H27				
				SW	137-1		F25				

BELL TELEPHONE LABORATORIES, INC.

NO. 5 CROSSBAR

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SD-25568-01, ISSUE 9

SD-25569-01

PRETRANSLATOR CONNECTOR CIRCUIT

DESIG.	OS
BSR0-2	138-1
CA	135-1, 138-1
CB0-2	134-1
FA	
FA1	
GA0-2	134-1
GB0-2	134-1
GC0-2	134-1
GCA0-2	134-1
GK	134-1
GK1	134-1
GR0-2	138-1
GS0-2	134-1
PA0-2	134-1
PB0-2	134-1
PC0-2	134-1
PCA0-2	134-1
PK	134-1, 138-1
PRA	134-1
PRB	134-1
PRS	134-1
PS0-2	134-1
PTR	140-1
PTR1	140-1

DESIG.	OS
TM	135-1
TM(Tube)	135-1
TM1	135-1
TR2	140-1
TRS	135-1
TRS(Tube)	135-1
TRS1	135-1
W	134-1
Z	134-1

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DATE	5-4-51	3-29-54		
R.B.G.	F.A.K.			

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SD - 25572 - 01
TROUBLE RECORDER CONTROL AND
TEST CIRCUIT

DESIG.	OS
ACO	635-2
CONT (Clutch)	635-2, 639-2
I- (Magnets)	636-1, 639-2
INT (Clutch)	635-2, 639-2
IX- (Magnets)	
LCH (Latch)	635-2, 639-2
LDT	639-2
MC	635-2
MCO	635-2
MCR (DC Contactor)	635-2
MCT	635-2
MCT (Tube)	635-2
NR	635-2
NR (Tube)	635-2
NRS	635-2
NRS1	635-2
NRT	635-2
NRT (Tube)	635-2
ON	635-2, 639-2
PA	639-2
PA1	639-2
RT1	639-2

SD - 25572 - 01 (CONTD.)
TROUBLE RECORDER CONTROL AND
TEST CIRCUIT

DESIG.	OS
SPC	639-2
ST	635-2, 639-2
STR1, 2	635-2, 639-2
T0-11	639-2
TM	635-2
TM (Tube)	635-2
TOS	635-2
TRB	635-2
TRC	635-2, 639-2
TST	639-2
TST1-3	639-2
WAR	635-2

SD - 25578 - 01
OUTGOING TRUNK CIRCUIT
FLAT RATE - COIN TIMING -
MESSAGE REGISTER OPERATION

DESIG.	OS
CC	
CH	216-1
CH (Tube)	216-1
CH1	
CN	
CO	
CS	
D	
F	
MRP	216-1
OF	
OM	
ON	
RCH	216-1
RL	
ROT (Mag)	216-1
S	
S1	
SP	
SP1	
TCM	216-1
TM	
TP	216-1
TT	

ISSUE 1 GGS 2 ANC 3 ANC
DATE 5-4-51 3-29-52 6-26-53
R.B.G. F.A.K.

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ISSUE 2 GGS 3 ANC 4 ANC
DATE 5-4-51 3-23-52 6-26-53
R.B.B. F.A.N.

SD - 25581 - 01
INCOMING TRUNK CIRCUIT
FROM SXS OFFICE

DESIG.	OS
A	185-1, 198-1, 673-1
B	185-1, 198-1
BY	185-1, 198-1
CH	198-1
CH (Tube)	198-1
D	186-1, 673-1
F	
PS	
PU	
R	198-1
RC	198-1
RL	180-1, 185-1, 198-1
RT	673-1
S	198-1, 673-1
T	185-1, 198-1
TC	198-1

SD - 25582 - 01
INCOMING TRUNK CIRCUIT
REVERSED BATTERY SUPERVISION
TYPE "A" TB SUPPLY

DESIG.	OS
A	
BY	149-1
CO	
D	
F	
PU	149-1
RC	149-1
RL	
RT	149-1
S	
T	
TC	149-1

SD - 25583 - 01
INCOMING TRUNK CIRCUIT
REVERSED BATTERY SUPERVISION

DESIG.	OS
A	169-1, 169-2, 173-1, 185-1, 187-1, 190-1, 194-1, 195-1, 225-1, 673-1, 674-1
BY	
CO	185-1, 187-1, 190-1, 194-1, 195-1
D	186-1, 187-1, 190-1, 194-1, 195-1, 673-1
F	116-1
PU	
RC	
RL	
RT	673-1, 674-1
S	169-1, 169-2, 225-1, 673-1, 674-1
T	225-1
TC	154-1

SD - 25585 - 01
LINK CIRCUIT

DESIG.	OS
AP	182-1, 184-1, 184-2, 184-3
ARP	180-2
CL	183-1, 184-1, 184-2, 184-3, 185-1, 187-1, 198-1, 214-1,
LH(Mag)	180-1, 180-2, 185-1, 187-1, 209-1, 209-2, 627-1
LSM(Mag)	180-1, 180-2, 209-1, 209-2
RB	180-1, 180-2, 209-1, 209-2, 608-1
RP	180-1, 180-2, 209-1, 209-2, 613-1
TF	183-1, 184-2, 184-3, 185-1, 187-1, 214-1
TN	183-1, 184-1, 184-2, 184-3, 185-1, 187-1
TP	155-1, 180-1, 180-2, 206-1, 209-1, 209-2, 214-1, 613-1
TR	183-1

SD-25586-01 MARKER CONNECTOR CIRCUIT			SD-25586-01 (CONTD.) MARKER CONNECTOR CIRCUIT			SD-25586-01 (CONTD.) MARKER CONNECTOR CIRCUIT		
DESIG.	LOCATION		DESIG.	LOCATION		DESIG.	LOCATION	
	OS	SD		OS	SD		OS	SD
ALA	104-1	D46	RC	102-1, 102-2, 102-4	(OR)C54 (IMGS)B63 (IR)D63 (IR)D73 (IR)B75	TRS(Tube)	104-1	D42
ALB	104-1	F46				W	102-1, 102-2, 102-3 102-4	E42
CA	104-1, 220-1	D41	RD	102-1, 102-2, 102-4	(OR)C56 (IR)D65 (IR)D75 (IR)B76	Z	102-1, 102-2, 102-3, 102-4	C42
CB	102-1, 102-2, 102-3 102-4, 214-1	A34-				SD-25587-01 OUTGOING SENDER CONNECTOR CIRCUIT		
CWA	103-1	C49	RE	102-1, 102-2, 102-4	E68			
CWB	103-1	D49	RFC	103-1	G46	DESIG.	OS	
FC	103-1	G44 A49	RFC1	103-1	H46	AMA	162-1	
FC1	103-1	A49 H44	RS	102-1, 102-2, 102-4; 186-1, 187-1, 190-1, 194-1, 195-1, 214-1	A30 A32	CH	115-1	
GT	220-1	H68	SPL	182-1, 214-1	F38	E-	161-1	
IM	104-1	E42	SPL1	182-1, 214-1	G38	MA	162-1	
IM1, 2	103-1	F48-	SRA	103-1	C46	MB	162-1	
MA	102-1, 102-2, 102-3 102-4	(LL)F31 (OR)E50 (IR)G60 (LL)B66 (IR)G70	SRB	103-1	E47	MC	162-1	
MB	102-1, 102-2, 102-3 102-4	(LL)F34 (OR)E52 (IR)G62 (LL)B68 (IR)G72	TC	103-1	F41	MP-	161-1	
MC	102-1, 102-2, 102-4	(OR)E54 (IR)G63 (IR)G73	TC1	103-1	G41	OSGA	161-1	
MD	102-1, 102-2, 102-4	(OR)E56 (IR)G65 (IR)G75	TCA	103-1	B48	OSGB	161-1	
ME	102-1, 102-2, 102-4	F68	TCA1	103-1	D49	PC	162-1	
MK	102-1, 102-2, 102-3, 102-4, 220-1	B42	TCB	103-1	E48	S	162-1	
MS-	102-1, 102-2, 102-3, 102-4, 106-1, 150-1, 220-1	B38	TCB1	103-1	E49	SA	162-1	
RA	102-1, 102-1, 102-4	(OR)C50 (IMGS)B60 (IR)D60 (IR)B70 (IR)D70	TM	103-1, 186-1, 187-1, 190-1, 194-1, 195-1	F41	SB	162-1	
RB	102-1, 102-2, 102-4, 195-1	(OR)C52 (IMGS)B62 (IR)D62 (IR)B72 (IR)D72	TM(Tube)	104-1	B40	SC	162-1	
RB6, 7	195-1	B72	TM1	103-1	B42	TR	115-1	
			TMA	103-1	C46	TR0-3	115-1	
			TMA(Tube)	104-1	C45			
			TMB	103-1	E46			
			TMB(Tube)	104-1	E45			
			TR	220-1	G42			
			TR1	220-1	G43			
			TRC	102-1, 102-2, 102-4	F79			
			TRL	220-1	G43			
			TRS	104-1	C42			

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SD-25587-01, ISSUE 14

NO. 5 CROSSBAR

RM 1-11

BELL TELEPHONE LABORATORIES, INC.

ISSUE	4	ANC
DATE	6-8-53	

SD-25656-01
RECORDING COMPLETING OR
SPECIAL SERVICE TRUNK CIRCUIT

DESIG.	OS
BY	
C	
F	116-1
H	
H1	
L	
L1	
R	
R1	
RC	
RV	
S1	
TK	

SD-25656-02
RECORDING COMPLETING OR
SPECIAL SERVICE TRUNK CIRCUIT

DESIG.	OS
BY	
C	
F	
H	
H1	
L	
L1	
R	
R1	
RC	
RV	
S1	
TC	154-1
TK	
TS	

SD-25663-01
INCOMING TRUNK CIRCUIT -
NO TEST

DESIG.	OS
A	
BY	
CO	
D	
D1	
F	214-1
F1	214-1
H	214-1
MR	214-1
PU	
R	
RC	
RL	
RS	
RT	
S	
T	
TC	

SD-25666-01
TOLL SWITCHING TRUNK CIRCUIT

DESIG.	OS
CN	
CN1	
CO	
DR	
DS	163-1
F	
FL	
OF	163-1
P	
R	
RV	
S	163-1
S1	
SL	
SL1	
SR	
SR1	
T	

SD-25671-01
ALARM CIRCUIT

DESIG.	OS
A	
AS	
AT	
FA	
MJ	104-1; 134-1; 135-1; 139-1; 146-1, 149-1; 172-1; 176-1; 208-1; 231-1, 240-1; 601-1; 635-1; 635-2; 638-1, 638-2
MJ0-2	104-1; 176-1
MN	115-1; 124-1; 124-2; 139-1; 223-1, 601-1; 635-1; 635-2; 638-1; 638-2
MN0-2	124-1; 124-2; 223-1
PF	
PFO	
PFS	
T1-4	
TB	

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SD - 25695 - 01
ALL MARKERS BUSY CIRCUIT

<u>DESIG.</u>	<u>OS</u>
B	
B1-3	102-1, 102-2, 102-2, 102-4
T	
TM(Tube)	

SD - 25702 - 01
NO TEST CONNECTOR CIRCUIT

<u>DESIG.</u>	<u>OS</u>
H(Hold Mag)	214-1, 632-1
S(Se1 Mag)	214-1, 632-1

SD - 25703 - 01
REVERTING CALL TRUNK CIRCUIT

<u>DESIG.</u>	<u>OS</u>
F	
PU	213-1
R	213-1
RC	213-1
RL	213-1
RR	213-1
RS	213-1
RT	213-1
S	213-1
S1	213-1
S2	213-1
ST	213-1
T	213-1

ISSUE	2	ANC	3	ANC															
DATE	3-31-52	6-26-53																	

F.A.K.

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SD - 25702 - 01, ISSUE 5
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ISSUE	1	ANC	2	ANC						
DATE	3-31-52	6-26-53								

F.A.K.

SD - 25704 - 01
REVERTING CALL TRUNK CIRCUIT

<u>DESIG.</u>	<u>OS</u>
A23	213-2
A34	213-2
DC	213-2
F	
G	213-2
L	
LA	213-2
LC-D	213-2
P	
P23	213-2
P25	213-2
P29	213-2
P34	213-2
P47	213-2
P60	213-2
PU	213-2
R	213-2
R1	213-2
RA	213-2
RC	213-2
RL	213-2
RL(Tube)	213-2
RP	213-2
RPD	213-2
RS	213-2
RT	213-2
RV	213-2
RVD	213-2

SD - 25704 - 01 (CONTD.)
REVERTING CALL TRUNK CIRCUIT

<u>DESIG.</u>	<u>OS</u>
S	213-2
S1	213-2
SR	213-2

SD - 25706 - 01
RINGING SELECTION SWITCH CIRCUIT

<u>DESIG.</u>	<u>OS</u>
HOLD0-9(Magnet)	149-1, 212-1
SELECT0-9(Magnet)	149-1

SD - 25708 - 01
INCOMING TRUNK CIRCUIT - DP
FROM LOCAL TEST DESK NO. 14 OR
LOCAL TEST CABINET NO. 3

<u>DESIG.</u>	<u>OS</u>
A	
A1, 2	
B	
BY	
C	
CO	
CT	
D	
D1, 2	
F	214-1
F1	214-1
FL	
H	214-1
H1	
HF	
MR	214-1
RC	
RV	
S	
S1	
SW	
TC	

SD-25711-01
TOLL SWITCHING TRUNK CIRCUIT

DESIG.	OS
CO	
DR	201-1
DS	201-1
F	201-1
FL	201-1
OF	201-1
P	201-1
RV	201-1
S	201-1
SL	201-1
SL 1	201-1
T	201-1

SD-25719-01
TONE TRUNK CIRCUIT

DESIG.	OS
CO	
CN	
F	
LB	154-1
S	
S1	
SA	
SP	
VP	154-1

SD-25720-01
COMMON OVERFLOW TRUNK CIRCUIT

DESIG.	OS
CT	
F	
PS	154-1
S	
S1	

SD-25721-01
COIN SUPERVISORY
CONCENTRATING CIRCUIT

DESIG.	OS
A	
B	
C (Sel Mag)	
CT	
H	
IN	
M	
ST	207-1
TA	
TM	

ISSUE	1	GGS	2	ANC	3	ANC
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R.B.B. F.A.K.

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ISSUE 3
DATE 3-29-52
K.A.K.
ANC 4
ANC
6-26-53

SD - 25731 - 01
RP INCOMING REGISTER CIRCUIT

DESIG.	OS	LOCATION	SD
AB	182-1		F47
ABS	182-1		F47
DCK	180-1		C25
F(Hold Mag)	183-1, 190-1		B45
FB(Hold Mag)	190-1		B43
FG0, 1	183-1		C47
FT(Hold Mag)	190-1		B43
FU(Hold Mag)	190-1		B44
GR	190-1		F32
H	180-1		B22
HIG	190-1		F48
HM	183-1, 190-1		B33
IB(Hold Mag)	190-1		B41
IB1	190-1		B22 F29
IF	190-1		A24
IF(Tube)	190-1		A23
IF1	190-1		B22
IG(Hold Mag)	190-1		B42
L	190-1		D31
LA-E	190-1		D33-
LR	190-1		C29
LR(Tube)	190-1		B28
M	607-1		H21
MB	190-1, 607-1		G22

DESIG.	OS	LOCATION	SD
MRL	190-1, 220-1		F25
OA	182-1		H47
OAS	182-1		G47
OB	182-1		G48
OBS	182-1		G48
ON	180-1, 190-1, 623-1		E24
ON1	190-1		E25
OVL	132-1		A26
P1-6	190-1		D36-
RA1, 2	183-1, 190-1		B31-
RB	180-1, 180-2, 190-1		A46 B49
RB1	180-2, 190-1		A49
RLK	190-1		C22
RV1-5	190-1		C26-
S0-9(Sel Mag)	183-1, 190-1		B40-
SM	183-1, 190-1		B35
STP	190-1, 617-1		F31
TC1, 2	190-1		F26-
TM	190-1		G21
TM(Tube)	190-1		A25
TMA	190-1		B27
TRL	190-1, 220-1		F23
TT	190-1		D26

INDEX OF RELAYS, ETC. ON SD'S & OS'S

SD - 25731 - 01, ISSUE 10

BELL TELEPHONE LABORATORIES, INC.

PRINTED IN U.S.A.

NO. 5 CROSSBAR

RM 1-23

ORDER AS BSP ITEM MP- 10528

ISSUE	2	GGS	3	ANC	4	ANC
DATE	5-4-51	3-29-52	6-26-53			
	R.B.B.	F.A.H.				

SD - 25734 - 01
OUTGOING SENDER LINK CIRCUIT

DESIG.	OS
SH(Mag)	163-1, 175-1, 201-1, 662-1
SS(Mag)	163-1

SD - 25735 - 01
TROUBLE RECORDER CIRCUIT

DESIG.	OS
ACO	635-1
CONT.(Clutch)	635-1, 639-1
I-(Magnets)	636-1, 639-1
INT(Clutch)	635-1, 639-1
IX-(Magnets)	
LCH(Latch)	635-1, 639-1
MC(D.C. Contactor)	635-1
MCO	635-1
ON	635-1
ST	635-1
TO	635-1
TO(Tube)	635-1
TRC1	635-1
TS	635-1
WAR	635-1

SD - 25736 - 01
COIN SUPERVISORY CIRCUIT

DESIG.	OS
AL	208-1
CB	207-1
CC	207-1
CK	207-1
CK1	207-1
CN	207-1
CO	207-1
CP	207-1
CR	207-1
DCK	209-1, 209-2
DS	207-1
H	209-1, 209-2
LA	208-1
LT	207-1
MB	209-1, 209-2
MB1	209-2
NC	207-1
OA	207-1
OA1	207-1
OD	207-1
ON	209-1, 209-2
OW	207-1

SD - 25736 - 01 (CONTD.)
COIN SUPERVISORY CIRCUIT

DESIG.	OS
R1	207-1
RB	207-1
RL	208-1
RL(Tube)	208-1
RL1	207-1
RLK	209-1, 209-2
RS	208-1
RS(Tube)	208-1
S	207-1
SCR	207-1
SCR1	208-1
SP	207-1
SP1	207-1
ST	207-1
T	207-1
T1	207-1
T1-	207-1
TA	208-1
TA(Tube)	208-1
TK	207-1
TM	208-1
TM(Tube)	208-1
TM1-4	208-1

SD - 25737 - 01
INTRAOFFICE TRUNK CIRCUIT
FOR COIN LINES - WITH TIMING

DESIG.	OS
CC	206-1
CH	206-1
CH(Tube)	206-1
CH1	206-1
CO	207-1
CS	207-1
F	
OM	206-1
ON	206-1
PU	
RC	206-1
RL	206-1
ROT(Magnet)	206-1
RT	
S	207-1, 208-1
S1	206-1
SP	207-1, 209-1, 209-2
SP1	207-1, 209-1, 209-2
TC	206-1

SD-25742-01
NO. 5 INTERRUPTER CIRCUIT
60 OR 120 IPM

DESIG.	OS
A1(Tube)	
A2(Tube)	
AL	
F	
G	
GF	
GT	
SR	201-1
T	
T1	
T1(Tube)	
T2	
T2(Tube)	

SD-25754-01
TRANSLATOR CIRCUIT

DESIG.	LOCATION OS
AR	504-1
CH	504-1
CH1, 2	504-1, 509-1
EO-6	
ESW	506-1
GO-19	504-1
GON	504-1
HN0-9	506-1
OFO-9(Tube)	506-1
OSW	506-1
OTR	504-1
SST	506-1

SD-25754-01
TRANSLATOR CIRCUIT (CONT)

DESIG.	LOCATION OS
SST(Tube)	506-1
SST1	506-1
SST1(Tube)	506-1
SW $\frac{2}{5}$	505-1
TO-9(Tube)	506-1
TH0-9(Tube)	506-1
TMB	504-1
TNO	
TOF	
TOP	
TR	504-1
TR0-6	
TVI0-6	504-1
TVOO-6	504-1
TVPO-6	504-1
U0-9(Tube)	506-1
VF0-4	505-1
W	506-1
XTB	504-1
XVF	505-1
Z	506-1

SD-25761-01
PERMANENT SIGNAL HOLDING TRUNK

DESIG.	OS
AN	223-1
B	223-1
C	223-1
CO	223-1
F	
FL	223-1
LC	223-1

SD-25761-01
PERMANENT SIGNAL HOLDING TRUNK (CONT)

DESIG.	OS
MA	223-1
PD	223-1
S	223-1
S1	223-1
S2	223-1

SD-25762-01
MASTER TEST FRAME
JACK, LAMP, AND KEY CIRCUIT

DESIG.	OS
ACV	124-1, 124-2
ACV1	124-1, 124-2
BAT	134-1
BG-	102-1, 102-2, 102-3, 102-4
CCT	124-1, 124-2
CGT	124-1
CGTNPBX	124-1
CGTPBX	124-1, 221-1
CLPT	124-1, 221-1
DLA	133-1, 167-1, 170-1, 171-1, 171-2, 173-1, 176-1, 185-1, 187-1, 190-1, 194-1, 195-1
DLA(Tube)	176-1
DLB	140-1, 521-1, 524-1, 528-1, 638-1, 638-2
MJ	139-1, 521-1, 522-1, 528-1, 638-1, 638-2
MN	139-1, 521-1, 638-2
MN1, 2	139-1, 521-1, 522-1, 638-1, 638-2
PCNY	
PSR	221-1, 646-1
PU	149-1

SD-25762-01
MASTER TEST FRAME
JACK, LAMP AND KEY CIRCUIT (CONT)

DESIG.	OS
PU1, 2	149-1
RCDR	638-2
RT0-4	682-1
RTO'-4'	682-1
RTCO-4	682-1
T1-9	521-1, 522-1, 528-1, 638-1, 638-2
T11, 12	638-1, 638-2
T14-19	638-1
TOA	176-1
UNO-4	134-1
UN6-8	134-1
W	522-1, 638-1, 638-2
Z	522-1, 638-1, 638-2

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SD - 25765 - 01
TONE TRUNK CIRCUIT
NON-COIN

DESIG.	OS
F	
LB	154-1
S	
SI	
SA	
VP	154-1

SD - 25766 - 01
CONCENTRATING CIRCUIT

DESIG.	OS
A	223-1
A1	223-1
AL	223-1
AN	223-1
B	223-1
B1	223-1
BY	223-1
C	223-1
C1	223-1
CA	223-1
CB	223-1
CC	223-1
CN	223-1
CO	223-1
CR	223-1
CS	223-1
D	223-1
D1	223-1
DS	223-1
E	223-1

SD - 25766 - 01 (CONTD.)
CONCENTRATING CIRCUIT

DESIG.	OS
H	223-1
H1	223-1
HC	223-1
HL	223-1
L	223-1
L1	223-1
LD	223-1
NC	223-1
P	223-1
PB	223-1
R	223-1
S	223-1
SD	223-1
SD1	223-1
SO	223-1
ST	223-1
TK(Magnet)	223-1
TM	223-1

SD - 25770 - 01
SUBSCRIBERS MESSAGE REGISTER CIRCUIT

DESIG.	OS
CA	
CA(Tube)	
CD	
CO	
MR(Register)	216-1, 217-1
MR(Tube)	216-1, 217-1
RP	
RS	
TP	
TS	

SD - 25793 - 01
MASTER TEST FRAME
PLANT REGISTER CIRCUIT

DESIG.	OS
CMST(MR)	680-1
CSTR(MR)	680-1
DMST(MR)	680-1
FEMF-LIT(MR)	
GTF(MR)	680-1
IR(Mag. Count)	680-1
IRF(MR)	680-1
MTR(MR)	680-1
MTTR(MR)	
OR(Mag. Count)	680-1
ORF(MR)	680-1
OS(Mag. Count)	680-1
OSF(MR)	680-1
PST(MR)	140-1, 680-1
PTR(MR)	140-1, 680-1
RTR(MR)	
SS(MR)	680-1
SRG1, 2-LIT(MR)	
TRE(MR)	680-1
TRG-LIT(MR)	
TST(MR)	
TTR(MR)	

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ISSUE 1 GGS 2 ANC 3 ANC
DATE 5-7-51 3-31-52 6-26-53
R.B.B. F.A.N.

ISSUE 2 QGS 3 ANC 4 ANC
DATE 5-7-51 3-23-52 6-2-53
R.B.B. F.A.H.

SD - 25794 - 01
"B" SWITCHBOARD
RP REGISTER CIRCUIT

DESIG.	OS	LOCATION	SD
A	194-1		B22
AB	182-1		G47
ABS	182-1		G48
DCK	180-1, 180-2		C27
F(Hold Mag)	183-1, 194-1		B45
FB(Hold Mag)	194-1		B43
FG0, 1	183-1		C47
FS	194-1		B28
FT(Hold Mag)	194-1		B43
FU(Hold Mag)	194-1		B44
GR	194-1		F32
H	180-1, 180-2		A21
HIG	194-1		E48
HM	183-1, 194-1		B33
IB(Hold Mag)	194-1		B41
IG(Hold Mag)	194-1		B42
L	194-1, 617-1		C31
LA-E	194-1		C32-
LR	194-1		F25
LR(Tube)	194-1		F25
M			F20
M1			B28
MB	194-1		D22
MRL	194-1, 220-1		E28
MS	194-1		E29
OA	182-1		G46
OAS	182-1		H47
OB	182-1		G48

SD - 25794 - 01 (CONTD.)
"B" SWITCHBOARD
RP REGISTER CIRCUIT

DESIG.	OS	LOCATION	SD
OBS	182-1		H48
ON	180-1, 180-2, 194-1, 623-1		D23
ON1	194-1		D25
P1-6	194-1		C37-
PD	194-1		B29
RA1, 2	183-1, 194-1		B31-
RB	180-1, 180-2, 194-1		D20
RLK	194-1		E22
S0-9(Se1 Mag)	183-1, 194-1		B40-
SM	183-1, 194-1		B35
SR	194-1		D29
STP	194-1, 617-1		E31
TC1, 2	194-1		C27-
TM	194-1		B25
TM(Tube)	194-1		B25
TRL	194-1, 220-1		E26
TT	194-1		C29

SD - 25795 - 01
GROUP BUSY CIRCUIT

DESIG.	OS
RB1-6	132-1
RT	132-1
TR(Tube)	132-1

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SD-25805-01

MASTER TEST FRAME CONNECTOR CIRCUIT

LOCATION			LOCATION			LOCATION			LOCATION		
DESIG.	OS	SD	DESIG.	OS	SD	DESIG.	OS	SD	DESIG.	OS	SD
A0-8	633-1	C77 E77	ON	631-1, 631-2, 635-1, 635-2	B70	RTE1	633-1	D88	TXE1	633-1	D87
ATP, 1	631-1, 631-2	A106-	ON1	631-2	H80	RTO	633-1	F84	TXO	633-1	D86
B0-4	633-1	C77 E77	PC0-2	633-1	G93	RTO1	633-1	D88	TXO1	633-1	D87
C0-5	633-1	C77 E77	PCN	631-2	A80	RTOS	635-1, 635-2	B71			
CH0-9	664-1	A79	PPR0-2	139-1, 631-1, 631-2	A91-	RTST	631-1, 631-2	A108	U0-9		B77
CIC	631-1, 631-2, 632-1	F72	PRA	631-1, 631-2	D92	S0-8	636-1	E78	V0-3	633-1	C84
CIT	631-1, 631-2, 632-1	C72	PRB	631-1, 631-2	E91	SKT	631-1, 631-2	B108	WO	633-1	C84
CITA	631-1, 631-2	A108	PTP	631-1, 631-2	A90	SL	656-1	H77			
EF		B77	PTT	631-1, 631-2	C91	SP0-3	214-1, 632-1	A77-	XTL		A89
EXB		D108				STC	631-2, 633-1	A87			
HN0-9		B77	R0-8	636-1	G78	STC1	631-2, 633-1	A86			
			RC	631-2	E82						
JCO-9		B77	RCR	631-2	E82	T0, 1	633-1, 636-1	C77			
LIT	631-1, 631-2	A96	RF		B77	T2, 3	633-1	E77			
MKA	631-1, 631-2	H75	RGCO, 1	633-1	E94-	T0-9		B77			
MKA1	631-1, 631-2	F75	RM	631-1, 631-2	E70	TM	634-1	E72			
MKA2	631-1, 631-2	E96	RM1	631-1, 631-2	G70	TM1, 2	634-1	D72			
MKB	631-1, 631-2	H74	RMA	631-1, 631-2	G71	TPE	631-2	A80			
MKB1	631-1, 631-2	F74	RNA	631-2	D81	TPO	631-2	A81			
MKB2	631-1, 631-2	E95	RON	631-1, 631-2	H71	TRC	635-1, 635-2	C71			
MKT	631-1, 631-2	D75	ROS	635-1, 635-2	D71	TRC1, 2	635-1, 635-2	D70-			
MKT1	631-1, 631-2	C96	RP	631-1, 631-2	G91	TS	631-1, 631-2, 634-1	E72			
MON	631-1, 631-2	A73	RP1	631-1, 631-2	G91	TTP	631-2	A83			
MPR-	221-1, 631-1, 631-2	A75	RPR-	631-2	A82-	TVA	631-2	G82			
MTE	631-2	C83	RPR-EMG	631-2	A81	TVA1	631-2	G83			
MTL	631-1, 631-2	B107	RR	631-2	E80	TVB	631-2	G83			
MTO	631-2	C83	RR1	631-2	G80	TVP-	631-2	A84-			
MTP	631-1, 631-2	A74	RT	631-2	G80	TVT	631-2	H82			
MTP1	631-1, 631-2	A107	RT1	631-2	D80	TVT3	631-2	E81			
MTR	631-1, 631-2	H72	RTE	633-1	F84	TXE	633-1	D86			

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R.B.B. F.A.H.

SD - 25816 - 01
TWO-WAY TRUNK CIRCUIT

DESIG.	OS
B	
CO	
D	204-2
F	
FL	
G	
IN	
L	204-2
L1	204-2
LF	
MB	
OF	
RD	
RV	
SG	
SL	
SL1	
TM	204-2
TT	
V(Tube)	

SD - 25821 - 01
INTERMARKER GROUP TRUNK CIRCUIT
TRUNK TO SUBSCRIBER

DESIG.	OS
A	179-1
BY	
FI	175-1
FO	
PU	
RC	179-1, 179-2
RL	179-1, 179-2
RT	
S	179-1, 179-2
T	179-1, 179-2
TC	
TM	123-1, 179-1, 179-2

SD - 25822 - 02
INTERMARKER GROUP TRUNK CIRCUIT
SUBSCRIBER TO TRUNK

DESIG.	OS
CH	178-1, 178-2
CH(Tube)	178-1, 178-2
CS	178-1, 178-2
FI	175-1
FO	
LF	175-1
MA	178-2
OF	178-1, 178-2
RL	178-1, 178-2
S	178-1, 178-2
S1, 2	163-1, 178-1, 178-2
TC	178-2
TR	178-2
TS	123-1, 178-1, 178-2
TT	

SD - 25823 - 01
OUTGOING TRUNK CIRCUIT
FLAT RATE - MESSAGE REGISTER OPERATION

DESIG.	OS
CH	216-1
CH(Tube)	216-1
CS	
D	
F	
MR	216-1
MRP	216-1
OF	
RL	
ROT(Mag)	216-1
S	
S1	
TCM	216-1
TM	
TP	216-1
TR	
TT	

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SD - 25816 - 01,	ISSUE	3
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SD - 25822 - 02,	ISSUE	5
SD - 25823 - 01,	ISSUE	8

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DATE 5-7-51 3-29-52 6-26-53
R.B.B. F.A.H.

SD - 25823 - 02
OUTGOING TRUNK CIRCUIT

DESIG.	OS
CH	
CH(Tube)	
CS	
D	
F	
MA	
MR	
MRP	
OF	
RL	
ROT(Mag)	
S	
S1, 2	
TC	
TCM	154-1
TM	
TP	154-1
TR	
TT	

SD - 25826 - 01
INTERMARKER GROUP
SENDER CIRCUIT

DESIG.	OS	LOCATION	SD
4DG	166-2		G47
5DG			G47
A $\frac{2}{5}$	164-1		C31-
AMA	166-2		C48
AV	226-1		C25
B $\frac{2}{5}$	164-1		C32-
C $\frac{2}{5}$	164-1		C33-
CL1-3	166-1, 166-2		F25-
CP $\frac{2}{5}$	166-2		G44-
D	175-1		C28
D $\frac{2}{5}$	164-1		C34-
E $\frac{2}{5}$	164-1		C35-
F $\frac{2}{5}$	164-1		C36-
FT0-3			B43-
FU $\frac{2}{5}$			B43-
G $\frac{2}{5}$	164-1		C37-
H $\frac{2}{5}$	164-1		C37-
HG $\frac{2}{5}$			B42-
J $\frac{2}{5}$	164-1		C38-
K $\frac{2}{5}$	164-1		C37-
L $\frac{2}{5}$	164-1		D38-

SD - 25826 - 01 (CONTD.)
INTERMARKER GROUP
SENDER CIRCUIT

DESIG.	OS	LOCATION	SD
L5D			G48
LR	163-1		C24
LST			G48
MB	176-1		D23
MB $\frac{2}{5}$	166-2		D45-
MRL	220-1		D23
MTRL	220-1		D24
ND			F24
NOB			E46
OBS			E46
ON	163-1, 175-1		D23
ON1	163-1, 226-1		D21
R	175-1		C28
RLT			B48
RMG	175-1		D29
RN $\frac{2}{5}$			B45-
RO	176-1, 221-1		F21
RP	166-2		E45
RS	175-1		D29
SB	163-1		E22
SC	166-2		E48
SR	163-1, 175-1		E25
SRT			F25
ST7	164-1		D20
STT			C48

SD - 25826 - 01 (CONTD.)
INTERMARKER GROUP
SENDER CIRCUIT

DESIG.	OS	LOCATION	SD
T	175-1		C27
TM	176-1		D22
TM(Tube)	176-1		D21
TM1	176-1		D21
TMG	175-1		C29
TP	166-2		E45
TR			B48
TS	175-1		C29
TVT	166-2		E49
VF0-4			B41-
VG $\frac{2}{6}$			B40-

ISSUE	2	CGS	3	ANC	4	ANC													
DATE	5-7-51	3-29-52	6-26-53																

R.B. F.A.N.

SD - 25832 - 01
INCOMING TANDEM TRUNK CIRCUIT
TYPE B TB SUPPLY

DESIG.	OS
A	179-1
BY	
CO	
CS	179-1
D	
F	
LF	
PU	
RC	
RL	
RT	
S	
T	179-1
TC	
TF	
TM	
TS	179-1

SD - 25833 - 01
INCOMING TANDEM TRUNK CIRCUIT
TYPE A TB SUPPLY

DESIG.	OS
A	225-1
BY	
CO	
CS	225-1
D	
F	
LF	
PU	
RC	
RL	
RT	
S	
T	225-1
TC	
TF	
TM	225-1
TS	123-1, 225-1

SD - 25834 - 01
INCOMING TRUNK CIRCUIT
FOR TESTING MESSAGE REGISTERS

DESIG.	OS
173A(INT.)	
A	
BY	
C	
C1	
CH	
CJ	
CO	
D	
DT	
F	214-1
FA	
FV	
IF	
NO	
OP	
R1	
RC	
S	
SC	
SV	
TC	
TP	

SD - 25837 - 01
INTERMARKER GROUP TRUNK CIRCUIT
SUBSCRIBER TO SUBSCRIBER

DESIG.	OS
BY	149-1
CH	177-1
CH(Tube)	
CL	
CS	177-1
FI	175-1
FO	116-1, 652-1
PU	149-1
RC	149-1, 177-1
RL	177-1
RT	149-1
S	177-1
S1	177-1
TC	149-1

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SD-25837-02
INTERMARKER GROUP TRUNK CIRCUIT
SUBSCRIBER TO SUBSCRIBER

<u>DESIG.</u>	<u>OS</u>
BY	
CH	177-2
CH(Tube)	177-2
CL	
CS	177-2
FI	
FO	
MA	177-2
PU	
RC	177-2
RL	177-2
RT	
S	177-2
S1, 2	163-1, 177-2
TC	
TCA	177-2
TR	177-2

SD-25838-02
INTERMARKER GROUP TRUNK CIRCUIT
FOR COIN LINES

<u>DESIG.</u>	<u>OS</u>
BY	
CH	
CH(Tube)	
CH1	
CL	
CO	
CS	
F1	
FO	
ON	
PU	
RC	
RL	
RT	
S	
S1	
SP1	
TC	

SD-25839-02
INTERMARKER GROUP TRUNK CIRCUIT
FLAT RATE AND MESSAGE REGISTER

<u>DESIG.</u>	<u>OS</u>
BY	
CH	
CH(Tube)	
CL	
CS	
F1	
FO	
MRP	
PU	
RC	
RL	
RT	
S	
S1	
TC	154 - 1
TCM	154 - 1
TP	154 - 1

SD-25840-01
COIN JUNCTION CIRCUIT

<u>DESIG.</u>	<u>OS</u>
CH	
CH(Tube)	
CH1	155-1
CO, CO1	155-1
CS	155-1
D, D1	155-1
F, F1	
LF, LF1	155-1
OF	
OM	
ON	
RL	
ROT(Mag)	
S, S1	155-1
SP	
SP1	155-1
TS	155-1
TT	

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SD-25844-01		
INCOMING INTERTOLL TRUNK CIRCUIT		
DESIG.	OS	
BY		
CO		
CS	203-1, 204-1	
D		
E	179-2, 203-1, 204-1	
F		
FL		
IN	203-1, 204-1	
LF		
LT		
OF		
PC	179-2	
PU		
RE		
RT		
RV	203-1, 204-1	
SV	179-2, 203-1, 204-1	
TF		
TS1, 2	179-2, 203-1, 204-1	

SD-25846-02		
OUTGOING INTERTOLL TRUNK CIRCUIT		
DIAL PULSING		
DESIG.	OS	
B		
CO		
CT		
D		
E	204-1	
F		
FL		
G		
LF		
MB		
OF		
OS		
P	204-1	
PD		
RV		
SL		
SL1		
SV	204-1	
T		
T1		
TM	204-1	
TT		
V(Tube)		

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R.B.B. K.A.K.			

SD - 25847 - 01
OUTGOING INTERTOLL TRUNK CIRCUIT
MF PULSING

DESIG.	OS
B	
D	
E	204-1
EA	
F	
FL	
G	
MB	
OF	
OS	
PD	
SL	
SL1	
SV	204-1
T	
T1	
TM	204-1
TT	
V1(Tube)	

SD - 25850 - 01
OUTGOING TRUNK CIRCUIT
FOR INTERTOLL COMPLETION

DESIG.	OS
BY	
F	
FL	
L1	203-1, 203-2
LS	203-1, 203-2
PD	
R	203-1, 203-2
S	203-1, 203-2
S1	203-1, 203-2
S2	203-1, 203-2
SF	203-1, 203-2
SV	203-1, 203-2
TM	203-1, 203-2

SD - 25858 - 01
OUTGOING TRUNK CIRCUIT
FOR INTERTOLL COMPLETION

DESIG.	OS
BY	
F	
LS	203-1, 203-2
PD	
PD1	
R	203-1
R(Tube)	203-1, 203-2
R1	203-1, 203-2
RB	203-1, 203-2
RB1	203-1, 203-2
S	203-1, 203-2
S1	203-1, 203-2
S2	
SV	203-1, 203-2
TM	203-1, 203-2

SD - 25859 - 01
COIN SUPERVISORY
RELEASE CIRCUIT

DESIG.	OS
AR	
CB	
CC	
D	
D(Tube)	
E	
LR	
RL	
SR	207-1
ST	
T	
T1-6	
TF	
TR	
TS	

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SD-25860-01
OBSERVING LINE CIRCUIT

<u>DESIG_e</u>	<u>OS</u>
A	217-1, 217-2
LF	217-1, 217-2
SL	217-1, 217-2
SL(Tube)	217-1, 217-2
YK	217-1, 217-2

SD-25863-01
FOREIGN AREA TRANSLATOR

<u>DESIG.</u>	<u>OS</u>
A $\frac{2}{5}$	232-1
AR00-49	236-1, 238-1
AT0-9	234-1
B $\frac{2}{5}$	232-1
BT00-99	234-1
BY	240-1
C $\frac{2}{5}$	232-1
CIA-D	228-1, 239-1
DO1	232-1
D7	
D24	
FA, FA1	240-1
FAT1-3	142-2, 227-1, 232-1
HFA	240-1
OATA-F	233-1
OEK	234-1
OER	234-1
ON	240-1
OR	232-1
ORA-F	233-1

SD-25863-01
FOREIGN AREA TRANSLATOR (CONTD.)

<u>DESIG.</u>	<u>OS</u>
ORC0-1	233-1
OTR	233-1
OTR0-4(Tube)	236-1
OTU0-4(Tube)	236-1
RSG	236-1
RT0-4	236-1
RU0-4	236-1
SRG	
SST	236-1
SST(Tube)	236-1
TAL	240-1
TAL(Tube)	240-1
TAN	232-1
TANA-F	233-1
TMC0-1	233-1
TOL	232-1
TOL0-4(Tube)	236-1
TOLA-F	233-1
TOLR	233-1
TST	239-1

SD-25864-01
FOREIGN AREA TRANSLATOR CONNECTOR

<u>DESIG.</u>	<u>OS</u>
ABC1, 2	227-1
CA1-3	228-1
CB1-3	228-1
DEF1	142-2, 227-1
DEF2	227-1
FA, FA1	231-1
FAB	228-1, 240-1
FAC A-C	227-1
FAST	227-1
FBB	228-1, 240-1
MCA	228-1
MCB	228-1
TAR0-9	142-2, 230-1, 236-1, 238-1
TBA	228-1
TBB	228-1
TFA	228-1
TPA	228-1
TPB	228-1
UAR $\frac{2}{5}$, 142-2, 230-1, 236-1, 238-1
UCK	230-1
XTAR	142-2, 230-1, 236-1, 238-1
XTAR1	142-2, 230-1

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SD-25890-01
TRAFFIC REGISTER CIRCUIT

<u>DESIG.</u>	<u>OS</u>
A	
B	
BP	
C	
CP	
D	132-1
D(MR)	
DA(MR)	
E	
F	
FO	
G	
GB(MR)	132-1
H	
J	
K	
L	
LD(MR)	
LK	
M	
OFL(MR)	
PC(MR)	171-1, 171-2
SO	
T(MR)	
TC(MR)	

SD-25892-01
TRAFFIC REGISTER CIRCUIT

<u>DESIG.</u>	<u>OS</u>
A	
A1	
CB	207-1
CB1	
CP	
DA	
DT	
FO	224-1
GB	132-1, 224-1
ND	
P	224-1
P1	224-1
PC	224-1
RB	224-1

BELL TELEPHONE LABORATORIES, INC.

SD-25892-01
TRAFFIC REGISTER CIRCUIT (CONTD.)

<u>DESIG.</u>	<u>OS</u>
S1 2	224-1
SB	
SO	224-1
SY	224-1
TB	

SD-25907-01
AUXILIARY COIN LINE CIRCUIT

<u>DESIG.</u>	<u>OS</u>
CB	101-2
CT	101-2
L	101-2
LC	101-2
LD	101-2
R	101-2
SL	101-2
SR	101-2

SD-25913-01
COMBINATION OUTGOING AND TOLL
SWITCHING TRUNK CIRCUIT

<u>DESIG.</u>	<u>OS</u>
CH	
CH(Tube)	
CS	
D	
F	
OF	
RL	
S	
S1	
TO	154-1
TO1	
TM	123-1
TT	

SD-25927-01
STATION RINGER TEST CIRCUIT

<u>DESIG.</u>	<u>OS</u>
CN	212-1
CO	
D	212-1
F	
L	212-1
L1	212-1
PU	212-1
RA	212-1
RB	212-1
RC	212-1
RS	212-1
RT	212-1
S1	212-1
SP	
ST	212-1
TL	212-1
V1(Tube)	212-1

SD-25929-01
PERMANENT SIGNAL HOLDING TRUNK

<u>DESIG.</u>	<u>OS</u>
AN	223-1
AN1	223-1
B	223-1
CN	154-1, 223-1
CO	223-1
F	
FL	223-1
IF	223-1
LO	223-1
M	223-1
MA	223-1
PB	154-1, 223-1
S	223-1
S1, 2	223-1
SP	223-1
TS	223-1

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NO. 5 CROSSBAR

RM 1-40

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RBB F.A.K.

SD - 25934 - 01
INCOMING INTERTOLL TRUNK CIRCUIT
DP OR MF PULSING

<u>DESIG.</u>	<u>OS</u>
A	203-2, 204-2
A1	
BY	
CO	
CS	203-2, 204-2
D	
D1	
F	
LF	
LT	
OF	
PU	
RC	
RT	
SV	203-2, 204-2
T	203-2, 204-2
TF	
TS1	203-2, 204-2
TS2	203-2, 204-2

SD - 55889 - 01
PERMANENT SIGNAL HOLDING TRUNK CIRCUIT
NO. 3C TOLL SWITCHBOARD

<u>DESIG.</u>	<u>OS</u>
C	223-1
CC	223-1
CN	223-1
CN1	223-1
CR	223-1
H	223-1
H1	223-1
H2	223-1
H3	223-1
NC	223-1
NC1	223-1
PB	223-1
PB1	223-1
R	223-1
R1	223-1
RG	223-1
RG1	223-1
S	223-1
S1	223-1
S2	223-1
SL	223-1
SL1	223-1
SL2	223-1
SL3	223-1
SL4	
SL5	

SD - 90523 - 01
SERVICE OBSERVING DESK NO. 7
TRUNK AND POSITION CIRCUIT

<u>DESIG.</u>	<u>OS</u>
C	217-1, 217-2
C1	217-1, 217-2
CH	
CH1	
DD	
G	
LO	217-1, 217-2
LO1	217-1, 217-2
LS(Pen Reg)	217-1, 217-2
MG	217-1, 217-2
MR	217-1
MR(Pen Reg)	217-1
P	217-1, 217-2
P1	
PF	
PL1-4	217-2
RL	217-1, 217-2
RL1-4	217-1
RP	217-1, 217-2
SN-	217-1, 217-2
SN+	217-1, 217-2

SD - 90523 - 01 (CONTD.)
SERVICE OBSERVING DESK NO. 7
TRUNK AND POSITION CIRCUIT

<u>DESIG.</u>	<u>OS</u>
T	
T'	
T1, 2, 4, 5	
U	
U1, 2, 4, 5	
W	
Z	

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R.B.				
F.A.R.				

SD - 90647 - 01
SERVICE OBSERVING CIRCUIT

DESIG.	OS
AL	217-2
AS	217-2
BS	
C	
CC	
CC1, 2	
CK	217-2
CO	
CR	
CR1	
CS	
CT	
J	217-1, 217-2
K	217-1, 217-2
LK	217-2
M	217-1, 217-2
MR	217-1
MR(Tube)	217-1
MR1	
MR2	
MR3	
MR4	
MR5	

SD - 90647 - 01 (CONTD.)
SERVICE OBSERVING CIRCUIT

DESIG.	OS
MR6	217-1
MR7	
MRA	
MRB	
MRC	
MRD	
MRY	217-1
NEG	
P	
PC	217-1, 217-2
POS	
POS1	
PS	217-1, 217-2
PS1	217-1, 217-2
R	217-1, 217-2
R1	217-1, 217-2
RA	
RB	
RC	
RL	217-1, 217-2
RLS	217-1, 217-2
S	
S1-3	
SS	217-1, 217-2
ST	217-1, 217-2
ST1	

SD - 90647 - 01 (CONTD.)
SERVICE OBSERVING CIRCUIT

DESIG.	OS
T	217-1, 217-2
T1-4	
TA5	
TL	
TM	217-2
TR	
TR1	
TST	217-1, 217-2
U1-4	
UA5	
W1, 2	
Z1, 2	

SD - 95087 - 01
SIGNALING RECEIVING CIRCUIT
MF PULSING

DESIG.	OS
0	187-1
1	187-1
2	187-1
4	187-1
7	187-1
10	187-1
CK1-3	187-1
KP1-3	187-1
SP	187-1

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DATE	5-7-51	3-31-52	6-26-53																

R.B.B. F.A.N.

SD-95391-01
MF CURRENT SUPPLY
AND DISTRIBUTION CIRCUIT

DESIG.	OS
0-1, 2-4, 7-10 (EVEN)	172-1
0-1, 2-4, 7-10 (ODD)	172-1
A1, 2	172-1
AL	172-1
ALM	172-1
B1, 2	172-1
BE	172-1
BO	172-1
C1, 2	172-1
CO	172-1
D1, 2	172-1
E1, 2	172-1
F1, 2	172-1
GE	172-1
GO	172-1
LE	172-1
LO	172-1
$\bar{V} \frac{2}{6}$ (Tube)	172-1

SD-95391-01 (CONTD.)
MF CURRENT SUPPLY
AND DISTRIBUTION CIRCUIT

DESIG.	OS
PL	172-1
PL1	172-1
TE	172-1
TE1-4	172-1
TO	172-1
TO1-4	172-1

SD-95531-01
TRAFFIC REGISTER CABINET CIRCUIT

DESIG.	OS
R(MR)	132-1, 142-1, 142-2, 224-1

SD-95536-01
SIGNALING RECEIVING CIRCUIT

DESIG.	OS
0	187-1
1	187-1
2	187-1
4	187-1
7	187-1
10	187-1
A(Tube)	187-1
B(Tube)	187-1
BR(Tube)	187-1
C(Tube)	187-1
CK2, 3	187-1
FT	187-1
KP	187-1
KP1	187-1
KP2	187-1
L1(Tube)	187-1
L2(Tube)	187-1
LK	187-1
SP	187-1
SP(Tube)	187-1

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SD-25548-01

LINE, LINK AND
CONNECTOR CIRCUIT

DESIG.	FUNCTIONAL MEANING
B	CLASS B LOAD CONTROL
C	CLASS C LOAD CONTROL
CH	CHAIN ALARM
*CWT	CALLS WAITING TIMER
DT	DIAL TONE
E-	EMERGENCY MARKER PREFERENCE
HGO-9	HORIZONTAL GROUP
J(Hold)	JUNCTOR HOLD MAGNET
LO-4	LINE
L(Hold)	LINE HOLD MAGNET
I(Sel)	LINE SELECT MAGNET
LGO-13	LINE GROUP CONNECTOR
LJ(Sel)	COMBINED LINE AND JUNCTOR SELECT MAGNETS
LO	LOCKOUT
MBO-1	MAKE BUSY
MCA	MARKER CONNECTOR
MCB	MARKER CONNECTOR
MP-	MARKER PREFERENCE (Regular)
NT(Hold)	NO-TEST CONNECTOR HOLD MAGNET
TR,TR0-3	TRANSFER PREFERENCE CHAIN
VGAO-13	VERTICAL GROUP (Orig. Calls)
VGBO-13	VERTICAL GROUP (Class of service)
VGSO-13	VERTICAL GROUP START

SD-25549-01

TRUNK LINK AND CONNECTOR
CIRCUIT

DESIG.	FUNCTIONAL MEANING
AO,1(Sel)	'A' APPEARANCE SELECT MAGNET
BO,1(Sel)	'B' APPEARANCE SELECT MAGNET
CH	CHAIN ALARM
E-	EMERGENCY MARKER PREFERENCE
EF	EXTENSION FRAME JC WINDING CONNECTOR
EL	EXTENSION FRAME LEFT
ER	EXTENSION FRAME RIGHT
FA--	'A' APPEARANCE TRUNK CONNECTOR
FB--	'B' APPEARANCE TRUNK CONNECTOR
GO-4	GROUP (Junctor group selecting)
J(Hold)	JUNCTOR HOLD MAGNET
JO-9(Sel)	JUNCTOR SELECT MAGNET
JCO-19	JUNCTOR CONNECTOR
L	LEFT (Side of frame)
LCO-9	LINK CONNECTOR
LCC	LINK CONNECTOR CONTROLLER
LV2-9	LEVEL CONNECTOR
MC,MCA-D	MARKER CONNECTOR
MP-	MARKER PREFERENCE
R	RIGHT (Side of frame)
RF	REGULAR FRAME JC WINDING CONNECTOR
T,TA	TRANSFER PREFERENCE CHAIN
T(Hold)	TRUNK HOLD MAGNET
T2-9(Sel)	TRUNK SELECT MAGNETS
TBO-5	TRUNK BLOCK
TR,TRO-5	TRANSFER PREFERENCE CHAIN
TRA	TROUBLE RECORDER
TST	TEST
TT	TRUNK
TTA	AUTOMATIC PROGRESSION TRUNK TEST
TTM	MANUAL TRUNK TEST

*Relay and Tube

SD-25550-01
MARKER CIRCUIT

DESIG.	FUNCTIONAL MEANING	DESIG.	FUNCTIONAL MEANING	DESIG.	FUNCTIONAL MEANING	DESIG.	FUNCTIONAL MEANING
ONN	AMA RECORDER 0, OR NO TRUNK SIGNAL	AMA,AMA1-5	AUTOMATIC MESSAGE ACCOUNTING	CH0-9,CHA	CHANNEL SELECTION	DRO-2	DENIED SERVICE REROUTE
1F,1FA	FIRST FAILURE TO MATCH	AMB	ALL MARKERS BUSY	CHE	CHANNEL END	DT1-3	DIAL TONE CLASS
1TB	AMA RECORDER 1, OR TOLL TRUNK BOTH PHYSICAL AND THEORETICAL	ANR,1	ALLOTTED NUMBER RECYCLE	CHT	CHANNEL TIMER	DTK	DIAL TONE CHECK
2DT2-9	TWO-DIGIT TRANSLATOR	AO	ALL OTHERS	CKG1-7	CONNECTOR CHECK GROUND	DX $\frac{2}{5}$	'D' DIGIT CODE
2F,2FA	SECOND FAILURE TO MATCH	AR	ADVANCE ROUTE	CKO	CHECK RELAYS OPERATED	E $\frac{2}{5}$	'E' DIGIT CHECK
2G	TWO JUNCTOR SUBGROUPS	ARK1,2	'A' ARBITRARY DIGIT CHECK	CKR	CHECK RELEASE	ECN	EVEN CONNECTOR
2MB	AMA RECORDER 2, OR MANUAL TRUNK BOTH PHYSICAL AND THEORETICAL	ARNO-5	'A' ARBITRARY DIGIT	CL0-5	CLASS	EG	END PBX GROUP
2P	TWO-PARTY (Class)	ARP	'A' ARBITRARY DIGIT PRIMARY	CLG	CLASS GROUNDS	EX7	'E' DIGIT CODE
2SG	TWO SENDER SUBGROUPS	ARS	'A' ARBITRARY DIGIT SECONDARY	CLK,CLK1-3	CLASS CHECK	F $\frac{2}{5}$	'F' DIGIT CHECK
2TLF	TWO TRUNK LINK FRAMES	ASB	ALL SENDERS BUSY	CLP	CLASS PRIMARY	FA,FA1	FUSE ALARM
2-3TLF	TWO-THREE TRUNK LINK FRAMES	AST	'A' SERIES START	CLS	CLASS SECONDARY	FAK	FRAME A (Appearance) CHECK
3FB	AMA RECORDER 3, OR FULL SELECTOR TRUNK BOTH PHYSICAL AND THEORETICAL	ATO-9	'A' DIGIT TRANSLATOR	CLT,CLT1-2	CLASS TIMING	FBO-19	FRAME BUSY
3G	THREE JUNCTOR SUBGROUPS	AVK	ADVANCE CHECK (Checks operation of AV relay in outgoing sender)	CN	COIN	FBK	FRAME B (Appearance) CHECK
3TLF	THREE TRUNK LINK FRAMES	AVK1	ADVANCE CHECK	CNC	COIN CLASS	FC-,FCA-	FRAME CONNECTOR
4TLF	FOUR TRUNK LINK FRAMES	B $\frac{2}{5}$	'B' DIGIT CHECK	*CON	CONTINUITY	FCG,FCGA	FALSE CROSS AND GROUND
4TT	AMA RECORDER R, OR TOLL TRUNK THEORETICAL	BC,BCA	BUSY CUT-IN	CON1,3	CONTINUITY	FCK,FCKA	FRAME CONNECTOR CHECK
5MT	AMA RECORDER 5, OR MANUAL TRUNK	BC $\frac{2}{5}$	'B' DIGIT CODE	COX	CUT-OFF (Of trouble recorder start condition)	FGO,1	FRAME (TRUNK) GROUP
5TLF	FIVE TRUNK LINK FRAMES	BG	BATTERY AND GROUND SUPPLY	CPO-4	CODE PATTERN	FKA	FRAME (TRUNK) CHECK
6FT	AMA RECORDER 6, OR FULL SELECTOR TRUNK THEORETICAL	BL	BUSY LINE	CPK1,2	CODE PATTERN CHECK	FLG,FLG1,2	FIRST LINKAGE GROUND
6TLF	SIX TRUNK LINK FRAMES	BN,BNA,B	BLANK NUMBER	CPP	CODE PATTERN PRIMARY	FM	FAILURE MATCH
7Q	SEVEN QUAD	BNTH	BLANK NUMBER THOUSAND OR HUNDREDS	CPS	CODE PATTERN SECONDARY	FM0-19	FRAME MEMORY
7TLF	SEVEN TRUNK LINK FRAMES	BRK1,2	'B' ARBITRARY DIGIT CHECK	CR	COIN RETURN	FMG	FRAME MEMORY GUARD
7TP	AMA RECORDER 7, OR TOLL TRUNK PHYSICAL	BRNO-4	'B' ARBITRARY DIGIT	CRO-10	COMPENSATING RESISTANCE OR CODE ROUTE	FMK	FRAME MEMORY CHECK
8MP	AMA RECORDER 8, OR MANUAL TRUNK PHYSICAL	BRP	'B' ARBITRARY DIGIT PRIMARY	CRK1-3	COMPENSATING RESISTANCE OR CODE ROUTE CHECK	FML	FRAME MEMORY LOCK
8TLF	EIGHT TRUNK LINK FRAMES	BRS	'B' ARBITRARY DIGIT SECONDARY	CRP	COMPENSATING RESISTANCE OR CODE ROUTE PRIMARY	FMP	FAILURE TO MATCH PEG COUNT
9FP	AMA RECORDER 9, OR FULL SELECTOR TRUNK PHYSICAL	BST	'B' SERIES START	CRRO-2	COIN ZONE REROUTE	FN	FREE NUMBER
9TLF	NINE TRUNK LINK FRAMES	BTOO-09	'A' OR 'B' DIGIT TRANSLATOR	CRS	COMPENSATING RESISTANCE OR CODE ROUTE SECONDARY	FNA	FREE NUMBER (Ringing or set by number group)
10TLF	TEN TRUNK LINK FRAMES	BT10-99	'B' DIGIT TRANSLATOR	CSO-29	CLASS OF SERVICE (0-29)	FNB	FREE NUMBER (Ring code 2)
11X	SERVICE CODES OR CDO'S AND FOREIGN AREA	EX	BIAS CROSS DETECTING	CTO-2	CLASS TENS (0-29)	FR	FILE RELEASE (Vertical)
20F	MAXIMUM 20 LINE FRAMES	BY	BUSY LINE	CTAO-2	CLASS TENS AUXILIARY (0-29)	FS0-19	FRAME SELECTION
40F	MAXIMUM 40 LINE FRAMES	C $\frac{2}{5}$	'C' DIGIT CHECK	CU $\frac{2}{5}$	CLASS UNITS	FSA	FRAME SELECTION
A	ADVANCE	CAA	CATCHALL AUXILIARY	CV00-99	CODE CONSERNSIONS	FT0-3	FRAME TENS
A $\frac{2}{5}$	'A' DIGIT CHECK	CB	CALL BACK	CVS	CODE CONVERSION SERIES	FTBO-3	FRAME TENS (Line Link)
AC $\frac{2}{5}$	'A' DIGIT CODE	CB1-5,7	CALL BACK	D	DIAL PULSE LINE FRAME	FTCO-19	FRAME TEST COMMON
AK	ADVANCE CHECK	CBD,CBD1	CALL BACK (Dial tone)	D $\frac{2}{5}$	'D' DIGIT CHECK	FTCK,FTCK1	FRAME TEST CHECK
ALO-3	ALLOTTED GROUPS	CBF	CALL BACK, CALL FORWARD	DCK	DOUBLE CONNECTION CHECK	FTK	FILE TEST CHECK (Vertical)
		CC $\frac{2}{5}$	'C' DIGIT CODE	DCT,DCT1-3	DOUBLE CONNECTION TEST	FTK1	FILE TEST CHECK (Vertical) (One and one only)
		CCT	CANCEL CONTINUITY TEST	DIS1,2)	DISCONNECT	FTL	FRAME TENS LOCK
		CDK0,1	'C' DIGIT CHECK	DISA)	DISCONNECT	FTNO-3	FRAME TENS NUMBER
		CGT	CANCEL GROUND TEST (Non PBX)	DL	DISPLAY LOST	FTT0-3	FRAME TENS TEST
				DL0-13	DELETE DIGIT	FTTB	AUXILIARY TO XFTN AND XFUN
				DLK1,2	DELETE DIGIT CHECK	FU $\frac{2}{5}$	FRAME UNITS
				DLP	DELETE DIGIT PRIMARY	FUL	FRAME UNITS LOCK
				DLS	DELETE DIGIT SECONDARY	FUN0-9	FRAME UNITS NUMBER

FUNCTIONAL DESIGNATIONS
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SD-25550-01

MARKER CIRCUIT (CONTD.)

DESIG.	FUNCTIONAL MEANING	DESIG.	FUNCTIONAL MEANING	DESIG.	FUNCTIONAL MEANING	DESIG.	FUNCTIONAL MEANING
FUTO-9	FRAME UNITS TEST	J $\frac{2}{5}$	'J' DIGIT CHECK	LNT	NO TEST LINE CHECK	NC	NUMBER CHECK CLASS
G $\frac{2}{5}$	'G' DIGIT CHECK	JB	JUNCTOR BUSY (No-test)	LOD	LOCK ODD	NC1-4	NUMBER CHECKING
GB	PBX GROUP BUSY	JCKO, 1	JUNCTOR CONNECTOR CHECK (Trunk link frame)	LOT, LOT1	LO LEAD TEST	NCA	NUMBER CHECKING AUXILIARY
GBA	SENDER SUBGROUP A	JGO-4	JUNCTOR GROUP	LP	PROGRESS LAMP CONTROL	NCCN	NON-CHARGE COIN
GBB	SENDER SUBGROUP B	JLE	JUNCTOR LOCK EVEN	LPA	LOCAL PHYSICAL 'A' OFFICE	NCF	NUMBER CHECKING FAILURE
GC	GROUND CONTROL	JLO	JUNCTOR LOCK ODD	LPB	LOCAL PHYSICAL 'B' OFFICE	NCK	NUMBER CHECK OK
GK	GATE CHECK	JSE	JUNCTOR SEQUENCE EVEN	LR	LINK RELEASE - INCOMING LINK (Indicates trouble condition)	NCL	NUMBER CHECKING LINE (Individual)
GLH, GLH1	GROUND-LINE HOLD MAGNET	JSO	JUNCTOR SEQUENCE ODD	LTA	LOCAL THEORETICAL 'A' OFFICE	NCNC	NON-CHARGE NON COIN
GOS	OUTGOING SENDER GATE	JSQO-5	JUNCTOR SEQUENCE	LTB	LOCAL THEORETICAL 'B' OFFICE	NCS, NCSA	NUMBER CHECKING SLEEVE (PBX)
GP1-3	GROUP TEST TRANSFER	JT	JUNCTOR TEST	LTR	LIGHT TRAFFIC	ND1	NO DIGIT (To be sent)
GPA	GROUP TEST TRANSFER SUBGROUP A	K $\frac{2}{5}$	'K' DIGIT CHECK	LXP, LXP1	LINE CROSSPOINT	NDK	NO DIGIT CHECK (To be sent)
GPB	GROUP TEST TRANSFER SUBGROUP B	KA	'A' DIGIT CUT-IN (Out sender class)	MO-9	MONITOR (Check for MR po- tential)	NE	NUMBER END
GS1-5	GROUND SUPPLY	KBC	'B' & 'C' DIGIT CUT-IN (Out sender class)	MAK	MARKER CONNECTOR CHECK (MA relay)	NGB	NUMBER GROUP PLUGGED BUSY
GSA1-4	GROUND SUPPLY AUXILIARY	KCM	CANCEL CODE CONVERSION INTERMARKER GROUP	MAK1	MCA RELAY OPERATE CHECK (Trunk link connector check)	NGC	NUMBER GROUP CONTROL
GT, GT1-5	GROUND TEST	KCV	CANCEL CODE CONVERSION	MAN	MANUAL (Class)	NGK, NGK1	NUMBER GROUP CHECK
GTL, GTL1-4	GROUND TRANSMITTING LEAD	KDE	'D' & 'E' DIGIT CUT-IN (Out sender class)	MB	MARKER BUSY	NGP, NGP1	TRUNK NUMBER GROUP PREFERENCE
GTU	GROUND TRANSMITTING TENS AND UNITS	KFG	'F' & 'G' DIGIT CUT-IN (Out sender class)	MB0-4	MESSAGE BILLING (Index)	NH	NO-HUNT
GW	GROUP (W)	KG	GROUNDING RELAY FOR KA, KBC, KDE, KFG, KHJ & KL RELAYS	MBP	MESSAGE BILLING PRIMARY	NOB	NO OBSERVING SERVICE
GZ	GROUP (Z)	KGS1, 2	DIGIT CUT-IN AND SHIFT	MES	MESSAGE BILLING SECONDARY	NOC	NO CLASS
H $\frac{2}{5}$	'H' DIGIT CHECK	KHJ	'H' & 'J' DIGIT CUT-IN (Out sender class)	MBS0-9	MESSAGE BILLING SERIES	NR	NUMBER RELEASE
HFA	HIGH VOLTAGE (+130 VOLTS) FUSE ALARM	KK	CHECK RELAY FOR KA, KBC, KDE, KFG, KHJ AND KL RELAYS	MCB1	MARKER CONNECTOR BUSY (For first four marker connectors)	NS	NO SENDER
HG $\frac{2}{5}$	HORIZONTAL GROUP	KKL	'K' & 'L' DIGIT CUT-IN (Out sender class)	MCB2-6	MARKER CONNECTOR BUSY (For succeeding marker connectors)	NSI	NO SENDER INTRAOFFICE ON AMA CALLS
HGG	HORIZONTAL GROUP GATE	L $\frac{2}{5}$	'L' DIGIT CHECK	MCK	MARKER CONNECTOR CHECK (MC relay)	NSO	NO SENDER OUTGOING
HGK	HORIZONTAL GROUP CHECK	LB	LINE BUSY	MCN	MANUAL COIN (Class)	NT, NT1-5	NO-TEST CLASS
HGL	HORIZONTAL GROUP LOCK	LB0-9	LINK BUSY	MDK	MCD RELAY OPERATE CHECK (Trunk link connector check)	NTC	NO-TEST AND NUMBER CHECK TIMING
HGL1	HORIZONTAL GROUP LOCK (One and one only)	LBT	LINE BUSY TEST	MF	MULTIFREQUENCY LINE FRAME	NTH	NO-TEST HOLD MAGNET TIMING
HGNO-9	HORIZONTAL GROUP NUMBER (Called line)	LCH	LOCAL CHARGE	MLF	MIXED LINE FRAME	NTR	NO-TEST RELEASE (Of marker)
HGR	HORIZONTAL GROUP RELEASE	LCK	LINK CONNECTOR CHECK (TLF)	MN, MN1	MONITOR	NTT	NO-TEST TRAIN (Busy line)
HGTO-9	HORIZONTAL GROUP TEST	*LDT	LONG DELAY TIMING	MON, MON1	MONITORING	OA	OFFICE 'A'
HMC	HOLD MAGNET CONTROL	LE	LOCK EVEN	MPT	M.R. SIGNAL POTENTIAL TEST	OAN	OFFICE 'A' NUMBERS
HMS, HMS1	HOLD MAGNET START	LF0-9	LINE FRAME LINK IDENTIFIER	MRL, MRL1	MARKER RELEASE	*OAT	OVER-ALL TIMING
HMT, HMT1	HOLD MAGNET TIMING	LFK	LINE FRAME CHECK	MSK	MARKER CONNECTOR CHECK (MS relay)	OAT1	OVER-ALL TIMING
HN $\frac{2}{5}$	HUNDREDS	LGT	LOOP GROUND TEST	MT, MT1-20	MARKER TEST	OB	OFFICE 'B'
HTK	HORIZONTAL GROUP TEST CHECK	LHT	LINE HOLD MAGNET TEST	MT3A, MT4A	MARKER TEST AUXILIARY	OBN	OFFICE 'B' NUMBERS
HTK1	HORIZONTAL GROUP TEST CHECK (One and one only)	LI	LINE IDLE	MXT	MASTER CROSS TEST	OBS, OBS1, 2	OBSERVING SERVICE
HTR	HEAVY TRAFFIC	LIN	LOCAL INTERCEPT	N1-4	NUMBER TRANSLATOR CUT-IN	OC, OC1, 2	ORIGINATING CALL
*HTT	HEAVY TRAFFIC TIMING	LK	LEFT HALF FRAME CHECK	N1A-4A	NUMBER TRANSLATOR CUT-IN AUXILIARIES	OCN	ODD CONNECTOR
HTUK	HUNDREDS, TENS, UNITS CHECK	LK1, 2	LINKAGE CHECK	NAR1-3	NO. ALLOTTER RECYCLE	OF4, OFH1	OVERFLOW HOLD MAGNET OPERATE (Ringing switch)
IMG	INTERMARKER GROUP CALL	LL $\frac{2}{5}$	LINE LINK			OFK	OVERFLOW (Line)
IMT	INTERMARKER GROUP TEST CALL	LLB	LINE LINK FRAME PLUGGED BUSY			OGC	OUTGOING CLASS (Having a sender)
INC	INCOMING TRUNK CALL	LLC1, 2	LINE LINK CONTROL			ONW	OFF-NORMAL WALK
INCO	INCOMING CLASS	LLI	LOCK LINE IDENTIFICATION			ONX	OFF-NORMAL CROSS
IRT	INCOMING REGISTER TEST					OPE	OPERATOR ERROR
ITA	INTRAOFFICE AUXILIARY					OPR	OPERATOR (Operator assistance)
ITR1-3	INTRAOFFICE CLASS					OPSO-3	OPERATOR (Assistance preroute)

FUNCTIONAL DESIGNATIONS
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SD-25550-01
MARKER CIRCUIT (CONTD.)

DESIG.	FUNCTIONAL MEANING	DESIG.	FUNCTIONAL MEANING	DESIG.	FUNCTIONAL MEANING	DESIG.	FUNCTIONAL MEANING
OR	ORIGINATING REGISTER CALL	PPX	PERMANENT SIGNAL PBX	RNT,RNT1,2	RECORDER NUMBER CHECK	SKB,SKB1	SENDER CONNECTOR CHECK (B subgroup)
ORK1,2	OUTGOING REGISTRATION CHECK	PR	PAIRED FRAMES (Trunk link)	RO,ROA	REORDER	SL	SLEEVE (Trunk link frame)
ORO A-D	ORIGINATING CLASS	PS	PERMANENT SIGNAL	RON	RECORDER OFF-NORMAL	SL0-9	SLEEVE TEST
ORT	ORIGINATING REGISTER TEST	PSA	PRESORT A GROUP	RP	RING PARTY	SLC	SLEEVE CUT-IN
OSO-4	OUTGOING SENDER SELECTION	PSA0-1	PRESORT AUXILIARY A GROUP	RPK	RING PARTY CHECK	SLCK,SLCK1	SC OPERATE CHECK (Number group)
OSA0-4	OUTGOING SENDER SELECTION AUXILIARY	PSB	PRESORT B GROUP	RQ	REGULAR QUAD	SLK,SLK1,2	SENDER LINK CHECK
OSC	OUTGOING SENDER CONTROL	PSB0-1	PRESORT AUXILIARY B GROUP	RR	REGISTER RETURN (Signal to register)	SNG1,2	SEIZE NUMBER GROUP
OSE	OUTGOING SENDER END	PSR	PERMANENT SIGNAL RECORD CONTROL	RRC	REGISTER RETURN COIN	SNK	SELECTIONS NORMAL CHECK
OSG0-4	OUTGOING SENDER GROUP	PT0-9(Tube)	POTENTIAL TEST (For M.R. signal)	RRK	REGISTER RETURN COIN CHECK	SO	SEQUENCE ODD
OSK	OUTGOING SENDER CHECK	PTC	PATTERN CONTROL	RS0-9	RINGING SELECT (Magnet)	SOG1-3	SUBSCRIBER OUTGOING CLASS
OST,OST1,2	OUTGOING SENDER REGISTRATION TIMING	PTK	PHYSICAL AND THEORETICAL CHECK	RSC	RELEASE SENDER CONNECTOR	SON	SENDER OFF-NORMAL
OTT	OPERATES TT (Trunk test) RELAY IN TRUNK	PTL(Tube)	POTENTIAL TEST LINE (For M.R. signal)	RSK	RINGING SWITCH SELECT MAGNET CHECK	SP	STOP PROGRESS
OV	OVERFLOW	PTN	PHYSICAL AND/OR THEORETICAL NUMBER	RT0-4	ROUTE TRANSFER	SPC	SPECIAL CALLS (Preference relay lockout)
P0-9	PATTERN	PU,PU1	PLUG UP	RTC	ROUTE TRANSFER CONTROL	SPH	SPECIAL HUNT (Operates on no-nothing lead)
PA	PATTERN 'A'	PUL	PLUGGED UP LINE	RTST	REGISTER TEST START LEAD (Used by monitor)	SPL,SPL1	SPECIAL CLASS
PB	PATTERN 'B'	R-	ROUTE (Ground supply groups)	RV,RV1-3	REVERTING	SPLC	SPECIAL CLASS AUXILIARY
PBN	PERMANENTLY BUSY NUMBER	R-	ROUTE (Originating register and catchall)	RYC	RECYCLE CONTROL	SPT	SPLIT TENS GROUP
PBX1,2	PRIVATE BRANCH EXCHANGE	RA1-6	ROUTE ADVANCE	RYT,RYT1	RECYCLE TIMING	SQ0-9	SEQUENCE
PBXA,B	PRIVATE BRANCH EXCHANGE AUXILIARY	RAV1,2	ROUTE ADVANCE (Recycle control)	S00-44	SERVICE	SQA,SQA1	SEQUENCE ADVANCE
PBY	PATHS BUSY	RBT	REGISTER RETURN BUSY	S100-144	SERVICE	SQT0,1	SEQUENCE TEST
PC	PATTERN 'C'	RCCK	RECORDER CHECK	S1K	S1 RELAY CHECK (In out trunk)	SRK	START RINGING CHECK
PC0-19	PEG COUNT (Preroute)	RCK1-3	RINGING SWITCH CHECK	SA0-9	SLEEVE TEST AUXILIARY	SSA	SENDER LINK SWITCH SELECT MAGNET (A subgroup)
PCCL	PULSE CONVERSION CLASS LEAD CONNECTOR	RCL,RCLA	RINGING CONTROL LOCK	SAE	SLEEVE AUXILIARY END	SSB	SENDER LINK SWITCH SELECT MAGNET (B subgroup)
PCD0,1	PULSE CONVERSION DIAL	RCN1-15	RINGING COMBINATION NUMBER	SB0-9	SLEEVE BUSY TEST (Line link)	ST7	START SIGNAL
PCL1-3	PULSE CONVERSION MARKER CLASS	RCT,RCTA,B	REVERSE CONTINUITY TEST	SCB,SCB1,2	START CALL BACK	STF	SINGLE TRUNK FRAME
PCN	PERMANENT SIGNAL COIN	RCT1-15	RINGING CONTROL	SCBA0-2	MARKER MAKE BUSY FOR SENDER CONNECTOR (A subgroup)	STP,STP1-3	STEPPING
PCN0,2,3,5	PULSE CONVERSION TRUNK CLASS	RCY,RCY1-4	RECYCLE	SCBB0-2	MARKER MAKE BUSY FOR SENDER CONNECTOR (B subgroup)	STX	STANDING CROSS TEST (Removes SCT)
PCR	PULSE CONVERSION, RE-VERTING	RD	ROUTE FOR DP ORIGINATING REGISTER	SCC	SERVICE CALL	SW	SENDER GROUP PREFERENCE (W)
PD	PARTIAL DIAL	RF,RFA	ROUTE FAILURE TO MATCH	SCK	CHECK - NON COIN RETURN, NON STUCK COIN	SZ	SENDER GROUP PREFERENCE (Z)
PEG	PEG COUNT	RGTO,1	RINGER TEST	SCN	STUCK COIN	T 2 5	TENS
PHC	PHYSICAL CODE	RGTA	RINGER TEST AUXILIARY	SCR	SC RELEASE CHECK (Number group)	TA0-9	'A' OR 'B' DIGIT TRANSLATOR
PK	CHECK - NON PERMANENT DIAL, NON PERMANENT SIGNAL	RI,RIA,B	REGULAR INTERCEPT	SCT	STOP CONNECTOR TIMING	TAL	TIME ALARM - OVER-ALL
PL	PER CENT LOAD (link busy)	RK	RIGHT HALF FRAME CHECK	*SDT	SHORT DELAY TIMING	TAN	TANDEM TRUNK CALL
PMO	PERMANENT OVERFLOW (Marker sets trunk in overflow)	RK1-3	REGISTRATION CHECK	SE	SEQUENCE EVEN	TAN0A-D	TANDEM TRUNK CALL
PN	PHYSICAL NUMBER	RLG	RETURN LOCK GUARD	*SF	SEIZED FRAME	TAN1A-D	TANDEM TRUNK CALL
PNC	PERMANENT SIGNAL NON COIN NON PBX	RMF	ROUTE FOR MF ORIGINATING REGISTER	SFR	SEIZED FRAME TIMER RELEASE	TAN2A-D	TANDEM TRUNK CALL
PNR	PATTERN NORMAL	RN	RECORDER NUMBER	SFT	SEIZED FRAME TIMING	TAN3A-D	TANDEM TRUNK CALL
		RN 2 5	RECORDER NUMBER	SIA	SENDER IDLE (A subgroup)	TAN4A-D	TANDEM TRUNK CALL
		RNG	RELEASE NUMBER GROUP	SIB	SENDER IDLE (B subgroup)	TBO-5	TRUNK BLOCK
		RNK1,2	RECORDER NUMBER CHECK	SKA,SKA1	SENDER CONNECTOR CHECK (A subgroup)	TBH	TROUBLE INTERCEPT-HOLD MAGNET OPERATE (Ringing switch)

*Relay and Tube

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MARKER CIRCUIT (CONTD.)

DESIG.	FUNCTIONAL MEANING
TBI, TBIA, B	TROUBLE INTERCEPT
TBK	TRUNK BLOCK CHECK
TBT, TBTA, B	TRUNK (or register) BUSY TIMING
TBW	TENS BLOCK WINDING
TC	TALKING CHARGE
TC5-7	TRANSLATOR CONTROL
TCCN	TALKING CHARGE COIN
TCH	TOLL CHARGE
TCH0-9	TEST CHANNEL
TCHK	TEST CHANNEL CHECK
TCK	TALKING CHARGE CHECK
TCNC	TALKING CHARGE NON COIN
TEA	TERMINATING AUXILIARY
TER1-4	TERMINATING CLASS
TF $\frac{2}{5}$	TRUNK FRAME UNITS
TFK1-3	TRUNK FRAME CHECK
TG	TRUNK GUARD (Test completed or not completed)
TG0-19	TRUNK GROUP
TGS1, 2	TRANSMITTING GROUND SUPPLY
TGT	TRUNK GUARD TEST (Prevents release of sender until TG releases)
TH $\frac{2}{5}$	THOUSANDS
THC	THEORETICAL CODE
TIN	TOLL INCOMING
TJ0-9	TEST JUNCTOR
TK	TEST CHECK (For channel timing)
TLC1-3	TRUNK LINK CONTROL
TLL0-9	TEST LINE LINK
TM	TIMING (Marker off-normal)
TMK	TANDEM CHECK
TMS	TIMING START
TN	THEORETICAL NUMBER
TNK	TRUNK NUMBER CHECK
TNR	TRUNK NUMBER RELEASE
TOA	TANDEM OUTGOING AUXILIARY
TOG1-3	TANDEM OUTGOING CLASS
TOL, TOLOA-D) TOL1	TOLL TRUNK CALL
TOS	TOLL ROUTE SERIES
TP	TIP PARTY
TPK	TIP PARTY CHECK
TR1	TAKE TROUBLE RECORD AND GIVE TROUBLE RELEASE
TR1A	TRIAL FIRST
TR2, 2A-2F	TRIAL SECOND
TRA	TROUBLE RECORDER TIME ALARM
TRB	TROUBLE RECORDER BUSY

DESIG.	FUNCTIONAL MEANING
TRL, TRLA	TROUBLE RELEASE DISCONNECT
TRL1	TROUBLE RELEASE DISCONNECT WITHOUT TAKING TROUBLE RECORD
TRN, TRN1	TRUNK NUMBER
TRR	TAKE TROUBLE RECORD AND GIVE NORMAL RELEASE
TRS	TRANSFER START
TRSA	TROUBLE RECORDER START AUXILIARY
TRST	TROUBLE RECORDER START
TRT	TROUBLE RECORDER - TIMING
*TRTR	TROUBLE RECORDER TROUBLE RELEASE
TS0-19	TRUNK SELECTED
TSE1-3	TRUNK SELECTED END
TST	TEST CALL
TT0-19	TEST TRUNK
TTK	OTT RELAY CHECK
TTLO-9	TEST TRUNK LINK
TVA	TRANSVERTER TEST CALL
TWT0-2	TWO-WAY TRUNKS
TX	TEST CROSS RELAYS
TXC1-9	TX CODE TRANSLATOR
TXD	TRANSLATE 'D' DIGIT
TYM	TIMING (For receipt of information from number group)
TYM1	TIMING FOR PBX ALLOTTER
U $\frac{2}{5}$	UNITS
UC	UNITS CUT-IN
UK	UNITS CHECK
UT	UNITS TRANSFER
VF0-4	VERTICAL FILE
VFG	VERTICAL FILE GATE
VFL	VERTICAL FILE LOCK
VFL1	VERTICAL FILE LOCK (One and one only)
VFN0-4	VERTICAL FILE NUMBER
VFT0-4	VERTICAL FILE TEST
VG $\frac{2}{6}$	VERTICAL GROUP
VGG1, 2	VERTICAL GROUP GATE
VGL, VGL1, 2	VERTICAL GROUP LOCK
VGN0-13	VERTICAL GROUP NUMBER (Called line)
VGR	VERTICAL GROUP RELEASE
VGT0-13	VERTICAL GROUP TEST
VP	VACANT CODE, PARTIAL DIAL
VTK	VERTICAL GROUP TEST CHECK
VTK1	VERTICAL GROUP TEST CHECK (One and one only)
*WT	WORK TIMING
X11	SERVICE CODES

DESIG.	FUNCTIONAL MEANING
XAB	CROSS ON FAK AND FBK RELAYS
XACH	XCH AUXILIARY
XACL	XCL AUXILIARY
XACP	XCP AUXILIARY
XACR	XCR AUXILIARY
XADL	XDL AUXILIARY
XAF	XF AUXILIARY
XAFT	XFT AUXILIARY
XAHG	XHG AUXILIARY
XAJC	XJC AUXILIARY
XAJG	XJG AUXILIARY
XAJS	XJS AUXILIARY
XALC	XLC AUXILIARY
XALG	XLG AUXILIARY
XALR	XLR AUXILIARY
XALV	XLV AUXILIARY
XAMB	XMB AUXILIARY
XAPTN	XPTN AUXILIARY
XARN	CROSSED 'A' ARBITRARY DIGIT
XARS	XRS1, 2 AUXILIARY
XATS	XTS AUXILIARY
XAVGA	XVGA AUXILIARY
XAVGB	XVGB AUXILIARY
XBRN	CROSSED 'B' ARBITRARY DIGIT
XBT	CROSS ON BT LEAD TO MARKER CONNECTORS
XCH	CROSS ON LH0-9 OR JO-9 LEADS (T.L.) OR LL0-9 LEADS (L.L.)
XCKR	CROSS ON PATH OF NOC AND CLK RELAYS
XCL	CROSSED CL0-5 RELAYS
XCLC	CROSSED CLASS OF CALL RELAYS (Fig. 43)
XCP	CROSSED CP0-4 RELAYS
XCR	CROSSED CR0-10 RELAYS
XCS	CROSSED CS0-29 RELAYS
XDL	CROSSED DL0-13 RELAYS
XF	CROSSED RF AND EE RELAYS (TL)
XFG	CROSSED FG0-1 RELAYS
XFT	CROSS ON FTC LEADS (TL)
XFTN	CROSSED FTN0-3 RELAYS
XFTT	CROSSED FTT0-3 RELAYS
XFUN	CROSSED FUN0-9 RELAYS
XFUT	CROSSED FUT0-9 RELAYS
XHG	CROSSED HG0-9 RELAYS (LL)
XJC	CROSSED JC0-19 RELAYS (TL)
XJG	CROSSED G0-4 RELAYS (TL)
XJS	CROSSED JO-9 SELECT MAGNETS (TL)
XLC	CROSSED LC0-9 RELAYS (TL)
XLG	CROSSED LG- RELAYS (LL)
XLH	CROSSED LINE HOLD MAGNETS

DESIG.	FUNCTIONAL MEANING
XLO	CROSS ON LOCKOUT LEADS TO LINE LINK
XLR	CROSSED L AND R RELAYS (TL)
XLS	CROSSED LINE LINK SELECT MAGNETS (LL)
XLV	CROSSED LV2-9 RELAYS (TL)
XMB	CROSSED MB0-4 RELAYS
XMRL	CROSS ON MRL LEAD TO MARKER CONNECTOR
XN	CROSS IN CALLED NUMBER FIGURES
XOB	CROSSED OBS AND NOB RELAYS
XPG	CROSSED PNR, PA, PB, PC RELAYS
XPT	CROSSED INCOMING TRUNK CLASS RELAYS
XPTN	CROSSED P0-P9 RELAYS
XRCT	CROSSED RCT RELAYS
XRL	FALSE GROUND ON RL LEAD TO ORIGINATING REGISTER MARKER CONNECTOR
XRS1, 2	CROSSED RINGING SWITCH SELECT MAGNETS
XRS3	CROSSED RSO, 1 RELAYS
XRS4	CROSSED RS2-9 RELAYS
XS, XSA	CROSSED S RELAYS (O.G. sender connector)
XSL	FALSE GROUND ON AST OR BST LEAD TO T.L.
XSS	CROSSED SENDER LINK SELECT MAGNET
XT	CROSSED TRANSLATOR CONTROL RELAYS
XT1, 2, 5	FALSE GROUND ON TRANSMITTING LEADS TO O.G. SENDER CONNECTOR
XTAN	CROSSED CLASS OF CALL RELAYS
XTB	CROSSED TB0-5 RELAYS
XTB1	CROSS ON TB0-5 LEADS TO TRUNK LINK
XTC, XTC1	FALSE GROUND ON TC LEAD TO L.L.M.C.
XTG	CROSSED TG0-19 RELAYS
XTG1	CROSS ON TG0-19 LEADS TO TRUNK LINK
XTRK	FALSE GROUND ON TRK LEAD TO MARKER CONNECTORS
XTRL	FALSE GROUND ON TRL LEAD TO MARKER CONNECTORS
XTS	CROSSED TRUNK SWITCH SELECT MAGNETS (TL)
XTS1	FALSE GROUND ON TRUNK SWITCH SELECT MAGNETS (TL)
XTV	CROSSED TVA AND SCC RELAYS
XVGA	CROSSED VGA RELAYS (LL)
XVGB	CROSSED VGB RELAYS (LL)

FUNCTIONAL DESIGNATIONS
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R.H.

SD-25551-01
REGISTER CIRCUIT
DP ORIGINATING

DESIG.	FUNCTIONAL MEANING
2P	TWO PARTY
11A-D	ONE-ONE PREFIX COUNTER
A $\frac{2}{5}$	'A' DIGIT REGISTER
AS	'A' DIGIT STEERING
B $\frac{2}{5}$	'B' DIGIT REGISTER
BS	'B' DIGIT STEERING
BT	BUSY TONE
C $\frac{2}{5}$	'C' DIGIT REGISTER
CI	COIN INTERRUPTER
CLR	COIN LINE RELEASE
CM3	CALL MARKER (Choice after 3 digits)
CMA-C	CALL MARKER CHOICE A-C
CN, CN1	COIN
CNT, CNT1-3	COIN TEST
CR, CRA	COIN RETURN
*CR1-4	COIN RETURN
CS	'C' DIGIT STEERING
CT(Tube)	COIN TEST TIMING
CT0-2	CLASS TENS
CU $\frac{2}{5}$	CLASS UNITS
D $\frac{2}{5}$	'D' DIGIT REGISTER
DL, DL1	DELAY
DMS	DELAY MARKER START
DS	'D' DIGIT STEERING
*DT	DIGIT TIMING
E $\frac{2}{5}$	'E' DIGIT REGISTER
ES	'E' DIGIT STEERING
EV	EVEN
F, F1	FRAME
F $\frac{2}{5}$	'F' DIGIT REGISTER
FS	'F' DIGIT STEERING
FT0-3	FRAME TENS
FU $\frac{2}{5}$	FRAME UNITS
G $\frac{2}{5}$	'G' DIGIT REGISTER
GS	'G' DIGIT STEERING
GT, GT1	GROUND TEST
H $\frac{2}{5}$	'H' DIGIT REGISTER
HG $\frac{2}{5}$	HORIZONTAL GROUP
HS	'H' DIGIT STEERING
J $\frac{2}{5}$	'J' DIGIT REGISTER
JS	'J' DIGIT STEERING
L, LA-E	LINE

SD-25551-01 (CONTD.)
REGISTER CIRCUIT
DP ORIGINATING

DESIG.	FUNCTIONAL MEANING
L $\frac{2}{5}$	'L' DIGIT REGISTER
LL $\frac{2}{5}$	LINE LINK
LS	'L' DIGIT STEERING
LT, LT1, 2	LINE TEST
M	MONITOR
MAN	MANUAL
MB	MAKE BUSY
MRL	MARKER RELEASE
MST, MST1	MARKER START
OBS	OBSERVING
OD	ODD
ON, ON1	OFF-NORMAL
OP	OPERATOR
OVL	OVERLOAD
P1-6	PULSE COUNTING
P2A, 6A	PULSE COUNTING
PD	PARTIAL DIAL
PRL	PRETRANSLATOR RELEASE
PST	PRETRANSLATOR START
RA, RA1	REGISTER ADVANCE
RL	RELEASE
S1	SEIZURE
SB0, 1	SERVICE 'B' DIGIT
SC0, 1	SERVICE 'C' DIGIT
SD	STATIONS DELAY
SR	SUPERVISORY
TA $\frac{2}{5}$	TRANSLATOR 'A' DIGIT
TAA, B	TRANSLATOR 'A' DIGIT
TA-	TRANSLATOR 'A' DIGIT
TB-	TRANSLATOR 'B' DIGIT
TB $\frac{2}{5}$	TRANSLATOR 'B' DIGIT
TBA-C	TRANSLATOR 'B' DIGIT
TC	TRANSLATOR 'C' DIGIT
*TM	TIME MEASURE
TM1, A, B	TIME MEASURE
TP	TIP PARTY
TP1	TIP PARTY ONE
TP2, TPA-C	TIP PARTY TWO
*TPT	TWO-PARTY TIMING
VF0-4	VERTICAL FILE
VG $\frac{2}{5}$	VERTICAL GROUP
VG10	VERTICAL GROUP TENS

*Relay and tube

SD-25556-01
NUMBER GROUP AND
CONNECTOR CIRCUIT

DESIG.	FUNCTIONAL MEANING
A	ADVANCE (To next TB)
ABT	ALLOTTED NUMBER TEN BLOCK TEST
AN	ALLOTTED NUMBER
B	SLEEVE BUSY
CH	CHAIN ALARM
E	MARKER PREFERENCE (Emergency)
FN	FREE NUMBER
HB0-9	HUNDRED BLOCK
MB0, 1	MAKE BUSY
MCA-C	MARKER CONNECTOR
MP	MARKER PREFERENCE (Regular)
NCK	NUMBER CHECK
OF	OVERFLOW (Non-hunting term)
POF	PBX OVERFLOW (Number hunting group)
SA	SELECT ADVANCE
SC	SLEEVE CONNECTOR
TB00-99	TENS BLOCK
TN	TRUNK NUMBER
TR, TR0-3	TRANSFER PREFERENCE CHAIN
U0-9	UNITS

SD-25565-01
RP INCOMING REGISTER
FOR TANDEM OPERATION

DESIG.	FUNCTIONAL MEANING
6D	SIX DIGIT CALL
CC	CODE CIRCUIT
CG0-3	CODE GROUP
CGC0-3	CODE GROUP CONNECTOR
CGS	CODE GROUP AUXILIARY
DCK	DOUBLE CONNECTION CHECK
F(Hold)	FRAME TRUNK LINK HOLD MAGNET
FB(Hold)	FINAL BRUSH HOLD MAGNET
FG0, 1	FRAME GROUP
FT(Hold)	FINAL TENS HOLD MAGNET
FU(Hold)	FINAL UNITS HOLD MAGNET
FU1(Hold)	FINAL UNITS HOLD MAGNET
GR	GROUND RETURN
H	HOLD
HM	HOLD MAGNET CONTROL
IB(Hold)	INCOMING BRUSH HOLD MAGNET
IB1	INCOMING BRUSH
IG(Hold)	INCOMING GROUP HOLD MAGNET
L, LA-E	LINE

SD-25565-01 (CONTD.)
RP INCOMING REGISTER
FOR TANDEM OPERATION

DESIG.	FUNCTIONAL MEANING
*LR	LINK RELEASE
LT0-9	LINE TENS DIGIT NUMBER
LU0-9	LINE UNITS NUMBER
M	MONITOR
MB	MAKE BUSY
MRL	MARKER RELEASE
NTAN	NON-TANDEM
NTS	NON-TANDEM SPECIAL
OB	OFFICE BRUSH
OBS	OFFICE BRUSH AUXILIARY
OD, OD1	OPERATOR DIRECT
OG(Hold)	OFFICE GROUP HOLD MAGNET
OGS(Hold)	OFFICE GROUP AUXILIARY HOLD MAGNET
ON, ON1	OFF-NORMAL
OVL	OVERFLOW
P1-6	PULSE COUNTING RELAYS
PA1-3	AUXILIARY PULSE RELAYS
RA1, 2	REGISTER ADVANCE
RB	REGISTER BUSY
REG	REGULAR FRAME
RLK	RELEASE LINK
RR	REGISTER RELEASE
RV	REVERSAL
RV1-5	REVERSAL
S, S1, S2	STRAIGHT FORWARD OPERATION
SEL0-9 (Sel)	SELECT MAGNET
SM	SELECT MAGNET CONTROL
SP	STOP PULSING
STP	STEPPER
SUP	SUPPLEMENTARY FRAME
TAN	TANDEM
TC1, 2	TRUNK CLOSURE
*TM	TIME MEASURE
TMA	TIME MEASURE AUXILIARY
TRL	TROUBLE RELEASE
TT	TELLTALE
TTA, B	AUXILIARY TO TT RELAY

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SD-25568-01
PRETRANSLATOR CIRCUIT

SD-25568-01 (CONTD.)
PRETRANSLATOR CIRCUIT

SD-25569-01
PRETRANSLATOR CONNECTOR CIRCUIT

DESIG.	FUNCTIONAL MEANING
11X	11 PREFIX TRANSLATOR
AC ² / ₅	'A' DIGIT REGISTER
BO,1	XOX AND X1X TRANSLATOR
B2-9	A-B TRANSLATOR 2, 2-3, AND 3 DIGITS
BA0,1	XOX AND X1X TRANSLATOR
BA2-9	A-B TRANSLATOR 2-3 AND 3 DIGITS
BC ² / ₅	'B' DIGIT REGISTER
BS	BASIC SETTING
CC ² / ₅	'C' DIGIT REGISTER
CCM	CONTINUITY CHECK 'CM' LEADS
CM3	CALL MARKER AFTER 3 DIGITS
CMA-C	CALL MARKER AFTER ANY NUMBER OF DIGITS (Controlled by register cross connections)
CR	'C' DIGIT PRIMARY TRANSLATOR (Digits 1,2,3)
CS	'C' DIGIT PRIMARY TRANSLATOR (Digits 4,5,6)
CSD	CONTINUITY CHECK 'SD' LEAD
CT	'C' DIGIT PRIMARY TRANSLATOR (Digits 7,8,9)
CU,CUA	'C' DIGIT SECONDARY TRANSLATOR (Digits 1,4,7)
CV,CVA	'C' DIGIT SECONDARY TRANSLATOR (Digits 2,5,8)
CW,CWA	'C' DIGIT SECONDARY TRANSLATOR (Digits 3,6,9)
CZ0,1	XOX AND X1X TRANSLATOR
CX2-9	'C' ZERO TRANSLATOR
CZC	'C' ZERO TRANSLATOR CONNECTOR
DL	DISPLAY LOST
FA,FA1,2	FUSE ALARM
HD	HOLD
HDK	HOLD CHECK
KTR	CHECK TRANSFER.
LCM	LOCK CHECK 'CM' LEADS
LSD	LOCK CHECK 'SD' LEAD
LT	LOCAL TRANSLATOR
MB	MAKE BUSY
PC	CONNECTOR CHAIN CHECK
PCK	PRETRANSLATOR CONNECTOR CHECK
PRL	PRETRANSLATOR RELEASE
PS	CONNECTOR CHAIN CHECK
PW,PW1	PRIMARY WINDING (Transmitting relays)
RCCK	RECORDER CHECK
RLK	RELEASE CHECK
SW,SW1	SECONDARY WINDING (Transmitting relays)
TM	TIME MEASURE

DESIG.	FUNCTIONAL MEANING
TR	TROUBLE RECORD
TR2	SECOND TRIAL
TRA	TROUBLE ALARM
TRB	TROUBLE RECORDER BUSY
TRB1	TROUBLE RECORDER BUSY AUXILIARY
TRBA	TROUBLE RECORDER BUSY AUXILIARY
TRL	TROUBLE RELEASE
TRS	TRANSFER START
TRST	TRANSFER RECORDER START
*TRTR	TROUBLE TIMER
*WT	WORK TIMER
XR	CROSS-DETECTION (Receiving leads)
XRL	CROSS-DETECTION (Release leads)
XT	CROSS-DETECTION (Transmitting leads)

DESIG.	FUNCTIONAL MEANING
BSR0-2	BASIC SETTING RELEASE
CA	CONNECTOR ALARM
CB0-2	CONNECTOR BUSY
FA,FA1	FUSE ALARM
GA0-2	REGISTER SUBGROUP CONNECTOR
GB0-2	REGISTER SUBGROUP CONNECTOR
GC0-2	REGISTER SUBGROUP CONNECTOR CONTROL
GCA0-2	REGISTER SUBGROUP CONNECTOR CONTROL
GK,GK1	GROUP CHECK
GR0-2	GROUND REMOVAL
GS0-2	REGISTER SUBGROUP PREFERENCE
PA0-2	REGISTER SUBGROUP PRETRANSLATOR CONNECTOR
PB0-2	REGISTER SUBGROUP PRETRANSLATOR CONNECTOR
PC0-2	REGISTER SUBGROUP PRETRANSLATOR CONNECTOR CONTROL
PCA0-2	REGISTER SUBGROUP PRETRANSLATOR CONNECTOR CONTROL
PK	PRETRANSLATOR CHECK
PRA,PRB	PRETRANSLATOR REGISTER CONNECTOR
PRS	PRETRANSLATOR REGISTER START
PS0-2	PRETRANSLATOR PREFERENCE
PTR,PTR1	PRETRANSLATOR SECOND TRIAL
*TM	TIME MEASURE
TM1	TIME MEASURE
TR2	SECOND TRIAL
*TRS	TRANSFER START TIMER
*TRS1	TRANSFER START TIMER
W,Z	START LEAD STEERING

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FUNCTIONAL DESIGNATIONS
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SD-25579-01
OUTGOING DIAL PULSE
SENDER CIRCUIT

DESIG. FUNCTIONAL MEANING

4 DG	FOUR DIGITS
5 DG	FIVE DIGITS
A $\frac{2}{5}$	'A' DIGIT REGISTER
AMA	AUTOMATIC MESSAGE ACCOUNTING
AR $\frac{2}{5}$	ARBITRARY DIGIT REGISTER (3 Digits)
ARS	ARBITRARY DIGIT STEERING
AS	'A' DIGIT STEERING
AV	ADVANCE
B $\frac{2}{5}$	'B' DIGIT REGISTER
BD	BETWEEN DIGITS
BR $\frac{2}{5}$	ARBITRARY DIGIT REGISTER (2 Digits)
BRS	ARBITRARY DIGIT STEERING
BS	'B' DIGIT STEERING
C $\frac{2}{5}$	'C' DIGIT REGISTER
CKP	CHECK PULSING
CL1	CLASS 1 (Prefix 1-1)
CL2	CLASS 2 COMMUNITY DIAL OFFICES AND 2-WAY TRUNK
CL3	CLASS 3 START DIAL SIGNAL
CL4, 4A	CLASS 4 20 PPS DIALING
CL5, 5A	CLASS 5 BATTERY - GROUND PULSING
CL6	CLASS 6
CLS	STEERING RELAY (Out-dial prefix 11)
COF	CANCEL OFF HOOK
CP $\frac{2}{5}$	CODE PATTERN
CR $\frac{2}{5}$	CODE ROUTE (Arbitrary digit)
CRS	STEERING RELAY (Out-dial arbitrary code)
CS	'C' DIGIT STEERING
CT	CUT-THROUGH
D $\frac{2}{5}$	'D' DIGIT REGISTER
DCR	DELETE CODE ROUTE (Arbitrary digit)
DL1	DELETE 1 DIGIT REGISTERED ON A REGISTER
DL2	DELETE 2 DIGITS REGISTERED ON A AND B REGISTER
DL3	DELETE 3 DIGITS REGISTERED ON A, B, AND C REGISTER
DL4	DELETE 4 DIGITS REGISTERED ON A, B, C, AND D REGISTER
DL5	DELETE 5 DIGITS REGISTERED ON A, B, C, D, AND E REGISTER
DL6	DELETE 6 DIGITS REGISTERED ON A, B, C, D, E, AND F REGISTER

DESIG. FUNCTIONAL MEANING

DS	'D' DIGIT STEERING
E $\frac{2}{5}$	'E' DIGIT REGISTER
EP	END OF PULSING
ES	'E' DIGIT STEERING
F $\frac{2}{5}$	'F' DIGIT REGISTER
FS	'F' DIGIT STEERING
FT0-3	FRAME TENS (Line link)
FU $\frac{2}{5}$	FRAME UNITS (Line link)
G $\frac{2}{5}$	'G' DIGIT REGISTER
GS	'G' DIGIT STEERING
H $\frac{2}{5}$	'H' DIGIT REGISTER
HG $\frac{2}{5}$	HORIZONTAL GROUP (Line link)
HS	'H' DIGIT STEERING
J $\frac{2}{5}$	'J' DIGIT REGISTER
JS	'J' DIGIT STEERING
K $\frac{2}{5}$	'K' DIGIT REGISTER
KS	'K' DIGIT STEERING
L $\frac{2}{5}$	'L' DIGIT REGISTER
L5D	LETTERED STATIONS ON FOUR DIGIT AND LETTER BASIS AND FIVE DIGIT NUMBERS
LC-E	PULSE DIVIDER
LR	LINE RELEASE
LS	'L' DIGIT STEERING
LST	LETTERED STATIONS
M	MONITOR
MB	MAKE BUSY
MB $\frac{2}{5}$	MESSAGE BILLING INDEX
MS	'M' DIGIT STEERING
NOB	NO OBSERVING
OBS	OBSERVING
OF	OFF-HOOK
ON, ON1	OFF-NORMAL
P	PULSE
P1-6	PULSE COUNTING
PA, PC	PULSE AUXILIARY (Battery and ground pulsing)
PG	PULSE GENERATOR
RLT	RELEASE TRANSVERTER
RN $\frac{2}{5}$	RECORDER NUMBER

DESIG. FUNCTIONAL MEANING

RO	REORDER
RP	RING PARTY
SB	SENDER BUSY
SC	SERVICE CLASS OF CALL
SG, SG1	STOP-GO DIALING
SP1	STOP PULSING 1
SP2	STOP PULSING 2
ST7	START SEVEN
STT	START TRANSVERTER
TG, TG1	TRUNK GUARD
TGT	TRUNK GUARD TIMING
*TM	TIMING
TP	TIP PARTY
TR	TROUBLE RELEASE (Transverter)
TRL	TROUBLE RELEASE
TT, TT1, 2	TRUNK TEST
TTK, TTK1	TEST TRUNK
TVT	TRANSVERTER TEST
VF0-4	VERTICAL FILE
VG $\frac{2}{6}$	VERTICAL GROUP
W	W CONTROL
WK	WINK
WR	W RELEASE
Z	Z CONTROL

ISSUE 2
DATE 12-22-52
R.E.H.

FUNCTIONAL DESIGNATIONS
SD-25579-01, ISSUE 15

SD-25580-01

MF OUTGOING SENDER CIRCUIT

DESIG.	FUNCTIONAL MEANING
4DG	FOUR DIGITS
5DG	FIVE DIGITS
A $\frac{2}{5}$	'A' DIGIT REGISTER
AMA	AUTOMATIC MESSAGE ACCOUNTING
AS	'A' DIGIT STEERING
AV	ADVANCE
B $\frac{2}{5}$	'B' DIGIT REGISTER
BS	'B' DIGIT STEERING
C $\frac{2}{5}$	'C' DIGIT REGISTER
CL1,2	CLASS
CLS	CLASS SELECTION ADVANCE FOR CL1
CP $\frac{2}{5}$	CODE PATTERN
CR $\frac{2}{5}$	CODE (Arbitrary digit)
CRS	CODE ROUTE SELECTION ADVANCE FOR CR $\frac{2}{5}$ (Out-dial arbitrary code)
CS	'C' DIGIT STEERING
CT	CUT-THROUGH
D $\frac{2}{5}$	'D' DIGIT REGISTER
DCR	DELETE CODE ROUTE (Arbitrary digit)
DL1	DELETE 1 DIGIT REGISTERED ON A REGISTER
DL2	DELETE 2 DIGITS REGISTERED ON A AND B REGISTER
DL3	DELETE 3 DIGITS REGISTERED ON A, B, AND C REGISTER
DL4	DELETE 4 DIGITS REGISTERED ON A, B, C, AND D REGISTER
DL5	DELETE 5 DIGITS REGISTERED ON A, B, C, D, AND E REGISTER
DL6	DELETE 6 DIGITS REGISTERED ON A, B, C, D, E, AND F REGISTER
DS	'D' DIGIT STEERING
E $\frac{2}{5}$	'E' DIGIT REGISTER
EP	END OF PULSING
ES	'E' DIGIT STEERING
F $\frac{2}{5}$	'F' DIGIT REGISTER
FS	'F' DIGIT STEERING
FT0-3	FRAME TENS (Line link)
FU $\frac{2}{5}$	FRAME UNITS (Line link)
G $\frac{2}{5}$	'G' DIGIT REGISTER
GS	'G' DIGIT STEERING
H $\frac{2}{5}$	'H' DIGIT REGISTER

SD-25580-01 (CONTD.)

MF OUTGOING SENDER CIRCUIT

DESIG.	FUNCTIONAL MEANING
HG $\frac{2}{5}$	HORIZONTAL GROUP (Line link)
HS	'H' DIGIT STEERING
J $\frac{2}{5}$	'J' DIGIT REGISTER
JS	'J' DIGIT STEERING
K $\frac{2}{5}$	'K' DIGIT REGISTER
KP,KP1	KEY PULSE SIGNAL
KS	'K' DIGIT STEERING
L $\frac{2}{5}$	'L' DIGIT REGISTER
L5D	LETTERED STATION ON FOUR DIGIT AND LETTER BASIS AND FIVE DIGIT NUMBER
LD	LAST DIGIT
LR	LINE RELEASE
LS	'L' DIGIT STEERING
LST	LETTERED STATION
M	MONITOR
MB	MAKE BUSY
MB $\frac{2}{5}$	MESSAGE BILLING
NOB	NO OBSERVING
OBS	OBSERVING
OF,OF1	OVERFLOW
ON,ON1	OFF-NORMAL
PG,PG1	PULSE GENERATOR
RLT	RELEASE TRANSVERTER
RN $\frac{2}{5}$	RECORDER NUMBER
RO	REORDER
RP	RING PARTY
SB	SENDER BUSY
SC	SERVICE CLASS OF CALL
SP	STOP PULSING
ST	START SIGNAL
ST7	START SEVEN (Last in registration series)
STT	START TRANSVERTER
TG,TG1	TRUNK GUARD
*TM	TIMING
TP	TIP PARTY
TR	TROUBLE RELEASE (Transverter)
TRL	TROUBLE RELEASE
*TTK	TEST TRUNK
TVT	TRANSVERTER TEST
VF0-4	VERTICAL FILE (Line link)
VG $\frac{2}{6}$	VERTICAL GROUP (Line link)

*Relay and Tube

SD-25585-01

LINK CIRCUIT

DESIG.	FUNCTIONAL MEANING
AP	AUXILIARY TRUNK PREFERENCE
ARP	AUXILIARY REGISTER PREFERENCE
CL	CLASS
LH(Hold)	LINK HOLD MAGNET
LSM(Select)	LINK SELECT MAGNET
RB	REGISTER BUSY
RP	REGISTER PREFERENCE
TF	TRUNK LINK FRAME
TN	TRUNK NUMBER (Tandem)
TP	TRUNK PREFERENCE
TR	TROUBLE RECORDER (Register Preference)

SD-25586-01

MARKER CONNECTOR CIRCUIT

DESIG.	FUNCTIONAL MEANING
ALA	ALARM - 'A' START CIRCUIT
ALB	ALARM - 'B' START CIRCUIT
CA	CONNECTOR ALARM
CB	CONNECTOR BUSY
CWA	CALLS WAITING - 'A' START CIRCUIT
CWB	CALLS WAITING - 'B' START CIRCUIT
FC,FC1	FRAME CONTROL
GT	GROUND TEST
IM,IM1,2	IDLE MARKER
MA-E	MARKER CONNECTOR
MK	MARKER SEIZURE CHECK (MA Relay)
MS	MARKER START
RA-E	REGISTER CONNECTOR
RB6,7	REGISTER CONNECTOR (6- OR 7- digit area)
RFC,RFC1	RELEASE FRAME CONTROL
RS	REGISTER START
SPL,SPL1	SPECIAL MARKER
SRA	SLOW RELEASE - 'A' START CIRCUIT
SRB	SLOW RELEASE - 'B' START CIRCUIT
TC	TRAFFIC CONTROL - STA CIRCUIT
TC1	TRAFFIC CONTROL - STB CIRCUIT

SD-25586-01 (CONTD.)

MARKER CONNECTOR CIRCUIT

DESIG.	FUNCTIONAL MEANING
TCA,TCA1	TRAFFIC CONTROL - STA CIRCUIT
TCB,TCB1	TRAFFIC CONTROL - STB CIRCUIT
*TM	TIMING
TM1	TIMING
*TMA	TIMING - 'A' START CIRCUIT
*TMB	TIMING - 'B' START CIRCUIT
TR,TR1	TROUBLE RELEASE
TRC	TROUBLE RECORDER CONNECTOR
TRL	TROUBLE RELEASE
*TRS	TRANSFER START LEAD
W,Z	MARKER START LEAD STEERING

SD-25587-01

OUTGOING SENDER CONNECTOR CIRCUIT

DESIG.	FUNCTIONAL MEANING
AMA	AUTOMATIC MESSAGE ACCOUNTING
CH	CHAIN TRANSFER AND ALARM
E	MARKER PREFERENCE (Emergency)
MA-C	MARKER CONNECTOR
MP	MARKER PREFERENCE (Regular)
OSGA	OUTGOING SENDER CONNECTOR - SUBGROUP A
OSGB	OUTGOING SENDER CONNECTOR - SUBGROUP B
PC	PULSE CONVERSION
S	SENDER CONTROL (Marker)
SA-C	SENDER CONNECTOR
TR,TR0-3	TRANSFER PREFERENCE CHAIN

FUNCTIONAL DESIGNATIONS

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RM 2-6

TRANSVERTER CIRCUIT

DESIG.	FUNCTIONAL MEANING	DESIG.	FUNCTIONAL MEANING	DESIG.	FUNCTIONAL MEANING	DESIG.	FUNCTIONAL MEANING
1TR	FIRST TRIAL	EST	END STATIONS (Pulse)	IC	IDENTIFIER CONTROL	PFAA	PERFORATE FOREIGN AREA 5 LINE ENTRY AUXILIARY
2L	TWO-LINE INITIAL ENTRY	EU	END UNITS (Pulse)	ICK	IDENTIFIER CONTROL CHECK	PFAK	'P' LEAD CHECK
2TR	SECOND TRIAL	EVN	EVEN-NUMBERED VERTICAL GROUP	IR	IDENTIFIER READY	RB	MAKE TRANSVERTER BUSY FROM MAKE BUSY JACK
4DG	FOUR-DIGIT	EXOA-C,E	EXTENDED AREA CALLED OFFICE CODE 0 DIGITS	LOA-C,E	LOCAL AREA - CALLED OFFICE CODE 0 DIGITS	RCCK	RECORD COMPLETION CHECK
4L	FOUR-LINE INITIAL ENTRY	EX1A-E	EXTENDED AREA CALLED OFFICE CODE 1 DIGIT	L1A-E	LOCAL AREA - CALLED OFFICE CODE 1 DIGIT	RF0-39	RING FRAME (Line link)
5DG	FIVE-DIGIT	EX2A-E	EXTENDED AREA CALLED OFFICE CODE 2 DIGITS	L2A-E	LOCAL AREA - CALLED OFFICE CODE 2 DIGITS	RK,RKA	RECORDER CHECK
AL	ALARM	EX3A-E	EXTENDED AREA CALLED OFFICE CODE 3 DIGITS	L3A-E	LOCAL AREA - CALLED OFFICE CODE 3 DIGITS	RL	RELEASE
ATB	ALL TRANSVERTERS BUSY	EX11	EXTENDED AREA (When 11 code is used)	L5D	LETTERED STATIONS - 5 DIGITS	RN $\frac{2}{5}$	RECORDER NUMBER
BBF	BULK BILL FREE CALLS	EXT	EXTENDED TIMING	LP	LINE PERFORATED	RP	RING PARTY
C1A,B	CUT-IN (Perforator)(Last line of two or four-line initial entry)	FA,FA1,2	FUSE ALARM	LST	LETTERED STATIONS	RS10	RECORDER START 10 (For test calls)
C2A-C	CUT-IN (Perforator)(Third line of four-line initial entry or first line of two-line initial entry)	FA $\frac{2}{5}$	FOREIGN AREA CODE REGISTER (XOX AND X1X CODE)	MB $\frac{2}{5}$	MESSAGE BILLING INDEX	RST0-9	RECORDER START
C3A-C	CUT-IN (Perforator)(Second line of four-line initial entry)	FA3D	FOREIGN AREA 3 DIGITS	MB9	MESSAGE BILLING INDEX 9 (Detail billed calls)	RTR	TROUBLE RELEASE WHEN RECORDER IS PLUGGED BUSY
C4A-C	CUT-IN (Perforator)(First line of four-line initial entry)	FAA-F	FOREIGN AREA STEERING RELAYS	MSR	MESSAGE REGISTER SLOW RELEASE	S7	STOP SENDING
CBG	CONNECTOR BUSY GROUND	FAB0-8	FOREIGN AREA REGISTER (First 2 digits of XOX and X1X code)	NOB	NON-OBSERVING	SC	SERVICE CALL
CBR,CBS	INDICATES PARTICULAR TRANSVERTER IS BUSY TO OTHER CONNECTORS	FABC	FOREIGN AREA 5 LINE RECORDING CHECK	OBS	OBSERVING	SCK	SUBSCRIBERS (Called) NUMBER CHECK
CFA-C	CUT-IN FOREIGN AREA A-C	FAC0-8	FOREIGN AREA REGISTER (3rd digit of XOX and X1X codes)	ODD	ODD-NUMBERED VERTICAL GROUP	SDT1	SENDER TEST 1
CH1,2	CHAIN CHECK RELAY (Transverter connector)	FACK	FOREIGN AREA $\frac{2}{5}$ CHECK OF XOX CODE	OF,OF1	OVERFLOW	SDT2	SENDER TEST 2
CK1-7	CHECK	FALK	FOREIGN AREA LINE CHECK	OFF0-5	OFFICE DESIGNATION (Calling lines)	ST $\frac{2}{5}$	STATIONS DIGIT
CKG	CHECK GROUND	FB $\frac{2}{5}$	FOREIGN AREA CODE REGISTER (XOX and X1X code)	OP1	OPEN 'P1' LEAD	T0-9	TENS DIRECTORY NUMBER REGISTER
CKP	CHECK PROGRESS	FC $\frac{2}{5}$	FOREIGN AREA CODE REGISTER (XOX and X1X code)	P1	PROGRESS - START OF PERFORATION (Last line of two-line or four-line initial entry)	*TAL	TIMING ALARM
CL0-5	COLUMN (Pair of vertical groups)	FCI,1	FOREIGN AREA CUT-IN (XOX and X1X code)	P2	PROGRESS - START OF PERFORATION (Third line of four-line or first line of two-line initial entry)	TAL1,2	TIMING ALARM
CO1-6	CUT-OFF STANDING TEST ON REGISTER LEADS	FT0-3	FRAME TENS	P3	PROGRESS - START OF PERFORATION (Second line of four-line initial entry)	TBC1-3	TRANSVERTER BUSY CONTROL
COA-C	CUT-OFF STANDING TEST ON PERFORATOR LEADS	FTOA-3A	FRAME TENS	P4	PROGRESS - START OF PERFORATION - (First line of four-line initial entry)	TBG	TRANSLATOR BUSY GROUND
COD	CUT-OFF STANDING TEST ON CONTROL LEADS	FU $\frac{2}{5}$	FRAME UNITS	P5	PROGRESS - START OF PERFORATION (Last line of perforator cycle complete)	TBL	TROUBLE ENCOUNTERED (In recorder)
CP $\frac{2}{5}$	CODE PATTERN	H4,7	HUNDREDS DIGITS OF CALLED NUMBER (As received)	P1A-4A	PROGRESS (End of perforation)	TBY	TRANSLATOR BUSY (Plug busy)
CR	CUT-IN RELAY RELEASE	HN0-9	HUNDREDS DIRECTORY NUMBER REGISTER	P1B	P1A AUXILIARY	TE	TROUBLE ENTRY
CT,CT1,2	CONDENSER TIMING			P1K	P1 CHECK	TE1	TROUBLE ENTRY - PROGRESS (At beginning of line)
DCB	BATTERY SUPPLY			P2K	P2 CHECK	TE1A	TROUBLE ENTRY - PROGRESS (At end of line)
DL	DISPLAY LOST			P3K	P3 CHECK	TEA,B	TROUBLE ENTRY
DNK,DNK1	DIRECTORY NUMBER CHECK $\frac{1}{10}$			P4K	P4 CHECK	TEC	TROUBLE ENTRY CHECK
				PFA	PERFORATE FOREIGN AREA 5 LINE ENTRY	TEP	TROUBLE ENTRY PRIME
						TF0-39	TIP FRAME (Line link)
						TH0-9	THOUSANDS DIRECTORY NUMBER REGISTER
						THS0,1	THOUSANDS DIGITS OF CALLED NUMBER (As received)
						TIK	TEST INFORMATION CHECK
						TK	TRANSLATOR (Cut-in check)
						TKK	TRUNK CHECK
						*TM1	TIMING (First and third intervals)

*Relay and Tube

FUNCTIONAL DESIGNATIONS
SD-25591-01, ISSUE 12

TRANSVERTER CIRCUIT (CONTD.)

DESIG.	FUNCTIONAL MEANING
*TM2	TIMING (Second and fourth intervals)
TM3,4	TIMING
TMS1	TIMING START (First and third intervals)
TMS2	TIMING START (Second and fourth intervals)
TOK	TEST OKAY
TP	TIP PARTY
TR	TROUBLE RECORD FOLLOWED BY REGULAR RELEASE (On test calls only)
TR1,TR1A	TRouble RECORD FOLLOWED BY TRouble RELEASE
TRB,TRBA	TRouble RECORDER BUSY
TRS	TRANSFER 'ST' LEAD IN CONNECTOR
TRST	TRouble RECORDER START
*TRT	TRouble RECORDER TIMING
TRT1	TRouble RECORDER TIMING
TS0-47	TRANSLATOR START
TST	TEST START LEAD
TTK	TEST TRUNK
TVT	TRANSVERTER TEST (Common test class)
TVT1-3	TRANSVERTER TEST (Recorder connector class)
U0-9	UNITS DIRECTORY NUMBER REGISTER
UD ² ₅	UNITS DIGIT CALLED NUMBER REGISTER
UMB	UNITS MARGINAL (More than one unit relay operated)
VG	VERTICAL GROUP CHECK
VG ² ₆	VERTICAL GROUP
X	CROSS
X2P	TWO P RELAYS OPERATED
XCK	CROSS CK LEAD
XET	CROSS EQUIPMENT TERMINALS
XG	CROSS GROUP
XIC	CROSS 'TIC' LEAD
XICA	CROSS 'TIC' LEAD
XICK	CROSS IDENTIFIER CONTROL CHECK
XL	CROSS ALL LEADS
XNL	CROSS NUMERICAL LEADS
XOF	CROSS 'OF' LEAD
XP	CROSS 'P' LEAD
XP1	CROSS 'P1' LEAD

DESIG.	FUNCTIONAL MEANING
XRB	CROSS 'RB' LEAD
XRL	CROSS RELEASE LEAD
XRS	MARGINAL - TWO RECORDER START RELAYS OPERATED
XRST	CROSS RECORDER START LEAD
XT	CROSS TENS TEST
XTKK	CROSS 'TKK' LEAD
XTL	CROSS TRANSLATOR LEADS
XTS	CROSS TRANSLATOR START
XTU	CROSS TENS OR UNITS RELAY

*Relay and Tube

FUNCTIONAL DESIGNATIONS
SD-25591-01, ISSUE 12

SD-25592-01

TRANSVERTER CONNECTOR CIRCUIT

DESIG.	FUNCTIONAL MEANING
ALA	ALARM - SUBGROUP A
ALB	ALARM - SUBGROUP B
CA	CONNECTOR ALARM
CB	CONNECTOR BUSY
CWA	CALLS WAITING - SUBGROUP A
CWB	CALLS WAITING - SUBGROUP B
GT	GROUND TEST
ITV	IDLE TRANSVERTER
SA-C	SENDER CONNECTOR
SH	SENDER HOLD - SHORT TIME-OUT
SRA	SUPERVISORY - SUBGROUP A
SRB	SUPERVISORY - SUBGROUP B
SS	SENDER START
TAB	TRANSVERTER AVAILABLE IN A OR B CHANNEL
TC, TC1	TRAFFIC CONTROL
TCA, TCA1	TRAFFIC CONTROL (Gate) - SUBGROUP A
TCB, TCB1	TRAFFIC CONTROL (Gate) - SUBGROUP B
*TM	TIMING
TM1	TIMING
*TMA	TIMING - SUBGROUP A
*TMB	TIMING - SUBGROUP B
TR, TR1	TROUBLE RELEASE
*TRS	TRANSFER START
TS	TRANSVERTER START
TV	TRANSVERTER SEIZED
TVA-C	TRANSVERTER CONNECTOR
W, Z	ALLOTTER (For incoming calls)

SD-25621-01

CALL IDENTITY INDEXER CIRCUIT

DESIG.	FUNCTIONAL MEANING
A1	ALARM (Indicates more than one TC-relay operated)
T0-9	TENS
TA0-9	TENS
TB0-9	TENS
TL0-9	TENS LEAD
U0-9	UNITS
UA0-9	UNITS

*Relay and Tube

ISSUE 1	GGS 2	ANC 3	ANC 4
DATE 1-22-51	3-19-52	12-22-52	
R.B.B.	F.A.K.	RE.H.	

SD - 25633 - 01
MASTER TIMING CIRCUIT

DESIG.	FUNCTIONAL MEANING	DESIG.	FUNCTIONAL MEANING	DESIG.	FUNCTIONAL MEANING
1CL	ONE CYCLE LOCKOUT (One cycle per key operation)	CO10-30	CUT-OFF ODD RECORDER MULTIPLE (From standing test)	ERO	EVEN RECORDER TO ODD MASTER
2R, 2R1, 2	SECOND REVOLUTION CONTROL	CO4E-6E	CUT-OFF STANDING TEST FROM EVEN MASTER TIMING CIRCUIT	ESE	END SEQUENCE EVEN (End of sequence connections to recorders from even master unit)
32	TEST CONTROL RELAY - TERMINAL 32	CO40-60	CUT-OFF STANDING TEST FROM ODD MASTER TIMING CIRCUIT	ESO	END SEQUENCE ODD (End of sequence connections to recorders from odd master circuit)
37	TEST CONTROL RELAY - TERMINAL 37	COM	CUT-OFF MASTER TIMER	ESP	END OF SPLICE PERFORATIONS
233	CONTROL RELAY TEST 33 SECOND CYCLE OF SWITCH	COP	CONTROL OPERATION OF PERFORATOR (Operated during splice perforation period - when released closes circuit for operation of perforator SPT relay)	EST	EMERGENCY START SIGNAL
234	CONTROL RELAY TEST 34 SECOND CYCLE OF SWITCH	CSE	CHECK SYNCHRONISM EVEN (Closes synchronism check circuit to operate CHE at end of 6-second time pulse)	ET, ET1	END OF TAPE (Controls start normal end of tape record)
235	CONTROL RELAY TEST 35 SECOND CYCLE OF SWITCH	CSO	CHECK SYNCHRONISM ODD (Closes synchronism check circuit to operate CHO at end of 6-second time pulse)	ETE	END OF TAPE EVEN (Alarm and make busy)
238	CONTROL RELAY TEST 38 SECOND CYCLE OF SWITCH	CSY	CHECK SYNCHRONISM (Of timers)	ETM	EXTEND TIME (After terminal 243 to lock P1 relay)
239	CONTROL RELAY TEST 39 SECOND CYCLE OF SWITCH	CTS	CONTROL TRANSFER START	ETO	END OF TAPE ODD (Alarm and make busy)
A, A1	"A" LEAD RELAY (Transfer control from recorder make busy circuit)	D1	"D" LEAD RELAY (Transfer control over "D" lead from recorder make busy circuit)	ETS	END OF TAPE START
ACO	ALARM CUT-OFF	DA	DAY (Control of part of perforator leads for day record)	EXA	EXERCISE
AD, AD1	ANSWER DISCONNECT (Controls advance of test switch position 38 to 41)	DAT	DAY AUXILIARY TIME (Provides day 1 time during advance of selectors at start of day)	EXD	EXERCISE DAY SWITCH RELAY
ADL	ANSWER DISCONNECT LOCK (Start of answer disconnect tests)	DC	DAY CONTROL (Of closure of perforator leads for daytime)	EXH	EXERCISE HOUR SWITCH RELAY
ADV	ADVANCE (Controls advance of other switches at end of hour)	DH	DAY SWITCH HELP	EXM	EXERCISE MONTH SWITCH RELAY
ALM	ALARM (Closes alarm leads)	DL	"D" LEAD	EXR	EXERCISE ROUND SELECTOR RELAY
AP1-16	AUXILIARY PATTERN CONTROL	DL1	DELAY DISCONNECT SIGNAL (Until DLR signal is sent)	FA, FA1, 2	FUSE ALARM
APR	APOLOGY REGULAR START	DLR	DELAY SIGNAL (Provides recorder signal on delay time-out)	GEO	GROUPING EVEN TO ODD (Connects an even recorder to odd master)
APT	APOLOGY TERMINATION	DR1-6	DAY OF ROUND RELAYS (6 or 10 rounds per month)	GOE	GROUPING ODD TO EVEN (Connects an odd recorder to even master)
B, B1	"B" LEAD RELAY (Transfer control from recorder make busy circuit)	DRL	DELAY RELEASE (Of class relays to insure change on transfer operation)	GR, GR1	GROUPING (Groups recorder connections to one master circuit)
BE1, 2	BUSY EVEN (Opens 6-second time pulse leads when even master is made busy)	DRP	DROP RECORDER PULSE (To prevent extra pulse if timers are out of synchronism)	GRE	GROUPING RECORDER (Groups recorder connections from normal odd to even master)
BLK	BLOCK RELAY (Operates if test blocks)	DT	DAY-TENS MAGNET	GRO	GROUPING RECORDER (Groups recorder connections from normal even to odd master)
BO1, 2	BUSY ODD (Opens 6-second time pulse leads when odd master is made busy)	DT	DAY-TENS SYNCHRONISM CHECK	GU	"GU" LEAD TEST
BT	BUSY TEST	DTH	DAY-TENS SWITCH ADVANCE HELP	H	HUNDREDS SYNCHRONISM MAGNET
CA, CA1	CONTROL ADVANCE (Of test switch to normal)	DTN	DISTRICT OR TRUNK NUMBER CONTROL	H	HUNDREDS SYNCHRONISM CHECK RELAY
CAS	CONTROL ADVANCE START	DTNP1-4	DISTRICT OR TRUNK NUMBER PATTERN	HA	HOURLY ADVANCE
CC	CLASS LEAD CLOSURE	DU	DAY UNITS MAGNET	HE	HOURLY INFORMATION FROM EVEN MASTER TIMING SWITCHES
CE	CHECK EVEN (Closes checking ground leads from even master circuit)	DU	DAY UNITS SYNCHRONISM CHECK RELAY (Failure to operate indicates out of synchronism)	HH	HUNDREDS HELP
CE1	CHECK EVEN (Closes synchronizing check leads)	E	"E" LEAD RELAY (Transfer control from recorder make busy circuit)	HL	HUNDREDS LAMP CONTROL (Minute)
CK	CHECK (Of class leads closed - A, B, D, E, SP)	ECH	EVEN CH (Auxiliary to "CH" contacts of timer to separate circuits - even)	HO	HOURLY INFORMATION FROM ODD MASTER TIMING SWITCHES
CKC	CHECK (Used in some tests of timing)	ER	EVEN RECORDERS START CONTROL	HRE	HOURLY ENTRY
CKE	CHECK EVEN (Checks synchronism of even recorder)	ERD	EVEN ROUND CONTROL	HRN	HOURLY NUMBER
CKO	CHECK ODD (Checks synchronism of odd recorder)	ERE	EVEN RECORDER TO EVEN MASTER	HRT	HOURLY TIME
CKR	CHECK RELEASE (Following trouble record)			HT	HOURLY TENS MAGNET
CO	CHECK ODD (Closes checking ground leads from odd master circuit)			HT	HOURLY TENS SYNCHRONISM CHECK RELAY
CO1	CHECK ODD (Closes synchronizing of odd recorder)			HTH	HOURLY TENS HELP AND SWITCH ADVANCE HELP
CO1E-3E	CUT-OFF EVEN RECORDER MULTIPLE (From standing test)			HU	HOURLY UNITS MAGNET
				HU, HUA	HOURLY UNITS SYNCHRONISM CHECK RELAY
				HUH	HOURLY UNITS SWITCH ADVANCE HELP

FUNCTIONAL DESIGNATIONS

SD - 25633 - 01, ISSUE 16

RM 2-9 3 SHEETS, SHEET 1

NO. 5 CROSSBAR

ORDER AS BSP ITEM MP-10572

BELL TELEPHONE LABORATORIES, INC.

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R.B.B.																														
F.A.K.																														
R.E.H.																														

3 SHEETS, SHEET 1

MP-10572

SD - 25633 - 01

MASTER TIMING CIRCUIT

DESIG.	FUNCTIONAL MEANING
ICK	ICK LEAD CHECK
KRB	CHECK RECORDER BUSY (Checks if a multicontact cut-in relay is operated)
LC1-4	LOCAL CIRCUIT CONTROL OF RECORD
LOK	LINE TESTS OK
LT1-9, A, B	LONG TIME CONTROL
M	MONTH SYNCHRONISM MAGNET
M	MONTH SYNCHRONISM RELAY
MA, MA1	MONTH ADVANCE (6 or 10 rounds per month)
MBE	MASTER MADE BUSY (Even)
MBO	MASTER MADE BUSY (Odd)
MC	MONTH CONTROL
MD	MONTH AND DAY CONTROL (6 or 10 rounds per month)
MDA	MONTH AND DAY ADVANCE CONTROL
MGE	MARKER GROUP ENTRY
MGN	MARKER GROUP NUMBER
MO	MONTH
MOH	MONTH HELP SWITCH ADVANCE
NS	NON SYNCHRONIZING (Provides non synchronizing entry for marker group 385 - timing out)
OC	OPEN CIRCUITS
OCH	ODD CH (Auxiliary to "CH" contacts of times to separate circuits - odd)
OME	OPERATE FOR MINUTES EVEN CIRCUIT
OMO	OPERATE FOR MINUTES ODD CIRCUIT
ON	OFF NORMAL
ORD	ODD ROUND CONTROL
ORE	ODD RECORDER TO EVEN MASTER
ORO	ODD RECORDER TO ODD MASTER
ORP	OPEN RECORDER PULSE (To prevent false extra pulse)
OST	ODD RECORDER START TEST
P	PULSE CLOSURE FOR MASTER SYNCHRONIZING
P	"P" LEAD CONTROL
P1-8	PERFORATION CONTROL
P1	"P1" LEAD CONTROL
P1A-8A	PERFORATION CONTROL
P1A	"P1" LEAD OPERATION
P1E	PULSE EVEN (Synchronizes recorders from even master)
P1O	PULSE ODD (Synchronizes recorders from odd master)
P2E	PULSE EVEN (Closes ground pulses for synchronizing recorders from even master)
P2O	PULSE ODD (Closes ground pulses for synchronizing recorders from odd master)
PC	PROGRESS CONTROL (Causes progress of circuit to next recorder for ET or day record)
PE	PULSE EVEN (Provides pulses to recorders and associated master)
*PF	PULSE FAILURE

DESIG.	FUNCTIONAL MEANING
PF1	PULSE FAILURE
PFA	PULSE FAILURE ALARM (Operates on failure of 6-second pulse)
PH	PULSE HELP (To insure operation of selector)
PLXE	PERFORATOR (Cross) LOCK EVEN
PLXO	PERFORATOR (Cross) LOCK ODD
PN1-15	PATTERN
PO	PULSE ODD (Provides pulses to recorders and associated master)
PRE	PREVENTION EVEN (Prevents use of even master circuit during time changes)
PRO	PREVENTION ODD (Prevents use of odd master circuit during time changes)
PTO	PERFORATOR TIMING OPERATE (Times operate closure for perforator magnet)
PTR	PERFORATOR TIMING RELEASE
RA	"RA" LEAD RELAY
RC	ROUND CONTROL
RC	"RC" LEAD RELAY (Recorder control)
RCCK	RELEASE CONTROL CHECK
RCE	RECORDER CONNECTOR EVEN CUT-IN
RCE1	RECORDER CONNECTOR EVEN (Cut-in on transverter tests)
RCE2,3	RECORDER CONNECTOR EVEN (Cut-in on answer disconnect tests)
RCK	"RC" LEAD CHECK (Recorder control)
RCO	RECORDER CONNECTOR ODD CUT-IN
RCO1	RECORDER CONNECTOR ODD (Cut-in on transverter tests)
RCO2,3	RECORDER CONNECTOR ODD (Cut-in on answer disconnect tests)
RCT	RECYCLE TIMING
RD	ROUND MAGNETS (6 or 10 rounds per month)
RD0-9	ROUND RELAYS (6 or 10 rounds per month)
RET	ROUTINE END OF TAPE FUNCTION
RH	ROUND HELP RELAY (6 or 10 rounds per month)
RK, RKA	RECORDER CONNECTED
RKO	RK RELAY OPERATED
RLS	RELEASE (At end of cycle to release circuit)
RN	RECORDER NUMBER (Was old DF)
ROS	RECYCLE ON SPLICE
RS	RELEASE (Of circuit at end of cycle)
RSC	RELEASE CONTROL (Delays release of RLS relay until change signal is provided)
RTS	RELEASE TEST SWITCH
RW, RW1, 2	RECORDER WAITING
RWC	RECORDER WAITING CONTROL
SA	SYNCHRONIZING AUXILIARY (To insure synchronizing master on same portion of switch area)
SC, SC1	STRADDLE CALL
SCF	START CONTROL EVEN (Of MB or transfer signal to even master circuit)

DESIG.	FUNCTIONAL MEANING
SCO	START CONTROL ODD (Of MB or transfer signal to odd master circuit)
SE	SYNCHRONIZING EVEN (Starts synchronizing of recorders from even master)
SKA	SKIP
SKP	SKIP (Provides entry to inform reader to skip splice information)
SLO	START LOCKOUT (Prevents start of test unless associated Fig. 8 is normal)
SO	SYNCHRONIZING ODD (Starts synchronizing of recorders from odd master)
*SP	SPLICE
SPA	SPLICE
SPT	SPLICE TRACTION ENTRY
SR	START RECORD (For hour pulse closure)
SRC	SYNCHRONISM RECORD CONTROL (Prevents record while selectors are on unused terminal)
SS	START OF SPLICE
SSF	SWITCH SYNCHRONISM FAILURE
ST-	START
STE	START TEST OF EVEN RECORDER
SY	SYNCHRONISM (All selectors in synchronism)
T	TENS MAGNET
T, TA	TENS RELAY (Tenths of hour synchronizing check)
T $\frac{2}{5}$ E	TIME (Hour) CONTROL - EVEN RECORDERS (To supply hour tens digit)
T $\frac{2}{5}$ O	TIME (Hour) CONTROL - ODD RECORDERS (To supply hour tens digit)
TAP	TEST APOLOGY START
TBE	TEST BUSY EVEN (Indicates that recorder connectors test busy to other than the odd master circuit)
TBO	TEST BUSY ODD (Indicates that recorder connectors test busy to other than the even master circuit)
TBR	TROUBLE RECORDER
TC	"TC" LEAD CHECK (Talking charge)
TCE	TIME CONTROL EVEN
TCO	TIME CONTROL ODD
TDE, TDE1	TIME DAY EVEN
TDE2	TIME DAY EVEN CIRCUIT
TDO, TDO1	TIME DAY ODD
TDO2	TIME DAY ODD CIRCUIT
TE	TEST END (Test cycle completed)
TEA	TIMER EVEN "A" AUXILIARY (Closes time pulses to even recorders under control of even timer "A" auxiliary)

*Relay and Tube

ISSUE	1	CGS	2	ANC	3	ANC					
DATE	1-22-51	3-19-52	12-22-52								

R.B.B. F.A.K. REH.

SD-25633-01
MASTER TIMING CIRCUIT

DESIG.	FUNCTIONAL MEANING
TEB	TIMER EVEN "B" AUXILIARY (Closes time pulses to even recorders under control of even timer "B" auxiliary)
TER	TIME EVEN ROUND
TFE	TRANSFER FUSE EVEN: (Makes even master busy)
TFO	TRANSFER FUSE ODD (Makes odd master busy)
TFT	TRANSFER TEST (Test for transfer of service for odd recorder from odd to even master timer)
TGT	TROUBLE GROUND TEST (Tests for false ground on "P" lead)
TH	TENS HELP
TIB	TROUBLE INDICATOR BUSY
TL	TENS LAMP CONTROL
TLK	TRANSVERTER LEAD CHECK (End of test pattern, start of transverter tests first cycle)
TM(Tube)	TIMING
TM1-6	TIMING
TME, TME1	TIME MONTH EVEN
TMO, TMO1	TIME MONTH ODD
TMP	TIME PULSE
TMR	TIME RELEASE (Indicates release to circuit on time out from trouble)
TOA	TIMER ODD "A" AUXILIARY (Closes time pulses to even recorders under control of odd timer when even is made busy)
TOB	TIMER ODD "B" AUXILIARY (Closes time pulses to odd recorders under control of even timer when odd is made busy)
TOK	TEST OK
TOR	TIME ODD ROUND
TPC	TEST PROGRESS CONTROL
TS, TS1	TRANSFERS SYNCHRONIZING CONTROL FROM EVEN TO ODD MASTER TIMER
TS	TEST SELECTOR MAGNET
TSC	TIMER START CONTROL
TSF	TIMER SYNCHRONIZING FAILURE
TSP	TIME SPLICE
TST1, 2	TEST START
TT	TIMER TRANSFER
TTE	TIMER TRANSFER CONTROL - EVEN TIMER IN USE
TTO	TIMER TRANSFER CONTROL - ODD TIMER IN USE
TTS	TIMER TRANSFER START
TVM	TRANSVERTER CLASS TEST (As controlled by master timer)
U	UNITS SYNCHRONISM MAGNET
U	UNITS SYNCHRONISM CHECK RELAY
U $\frac{2}{5}$ E	TIME (Hour) CONTROL - EVEN RECORDERS (To supply hour units digit)
U $\frac{2}{5}$ O	TIME (Hour) CONTROL - ODD RECORDERS (To supply hour units digit)

DESIG.	FUNCTIONAL MEANING
UH	UNITS HELP SWITCH ADVANCE
UL	UNITS LAMP CONTROL
XPE	CROSS PERFORATOR EVEN TEST (For false battery or ground)
XPE1	CROSS PERFORATOR EVEN TEST (For crosses on ground)
XPO	CROSS PERFORATOR ODD TEST (For false battery or ground)
XPO1	CROSS PERFORATOR ODD TEST (For crosses on ground)

FUNCTIONAL DESIGNATIONS

SD-25633-01, ISSUE 1 6

3 SHEETS, SHEET 3 RM 2-9

ORDER AS BSP ITEM MP-10572

BELL TELEPHONE LABORATORIES, INC.

PRINTED IN U.S.A.

NO. 5 CROSSBAR

SD-25693-02
INTRAOFFICE TRUNK CIRCUIT

DESIG.	FUNCTIONAL MEANING
*CH	CHARGE
CS	CALLED PARTY SUPERVISORY
F	FRAME (Connects trunk to marker)
MA	AUTOMATIC MESSAGE ACCOUNTING
PU	PICK-UP
RC	RINGING CONTROL
RL	RELEASE (Thermal delay relay)
RT	RINGING TRIP
S, S1,2	SUPERVISORY (Of calling station)
TC	TALKING CHARGE - AMA
TR	TRANSFER (Thermal delay relay - avoids false overtime)

SD-25729-01
INCOMING REGISTER CIRCUIT
DIAL PULSING

DESIG.	FUNCTIONAL MEANING
11A, B	ONE-ONE PREFIX COUNTER
2DT	TWO DIGITS OF THREE-DIGIT LOCAL CODE TRANSMITTED (Tandem Trunks)
A $\frac{2}{5}$	'A' DIGIT REGISTER
AB, AB1	'A' AND 'B' OFFICES
ABS, ABS1	'A' AND 'B' SPECIAL MARKER
*AC	ABANDONED CALL
ACC	ABANDONED CALL CONTROL
AS	'A' DIGIT STEERING
B $\frac{2}{5}$	'B' DIGIT REGISTER
BL	BY-LINK
BLK	BY-LINK CHECK
BS	'B' DIGIT STEERING
C $\frac{2}{5}$	'C' DIGIT REGISTER
CK	CLASS CHECK
CS	'C' DIGIT STEERING
D $\frac{2}{5}$	'D' DIGIT REGISTER
DCK	DOUBLE CONNECTION CHECK

SD-25729-01 (CONTD.)
INCOMING REGISTER CIRCUIT
DIAL PULSING

DESIG.	FUNCTIONAL MEANING
DL, DL1	DELAY (4 additional digits)
DP	DIRECT PULSING
DS	'D' DIGIT STEERING
*DT	DIGIT TIMING
E $\frac{2}{5}$	'E' DIGIT REGISTER
ES	'E' DIGIT STEERING
EV	EVEN
F $\frac{2}{5}$	'F' DIGIT REGISTER
FG0,1	FRAME GROUP
FS	'F' DIGIT STEERING
FVD, FVD1	FIVE DIGIT (Tandem trunk)
G $\frac{2}{5}$	'G' DIGIT REGISTER
GS	'G' DIGIT STEERING
H	HOLD MAGNET
H $\frac{2}{5}$	'H' DIGIT REGISTER
HS	'H' DIGIT STEERING
J $\frac{2}{5}$	'J' DIGIT REGISTER
JS	'J' DIGIT STEERING
K $\frac{2}{5}$	'K' DIGIT REGISTER
KS	'K' DIGIT STEERING
L, LA-E	LINE
L $\frac{2}{5}$	'L' DIGIT REGISTER
*LR	LINK RELEASE
LS	'L' DIGIT STEERING
LT0-9	LINK TENS DIGIT NUMBER 0-9 (Indicates trunk location on register link bay) FOR TANDEM AND TOLL
LU0-9	LINK UNITS DIGIT NUMBER 0-9 (Indicates trunk location on register link bay) FOR TANDEM AND TOLL
M	MONITOR
MB	MAKE BUSY
MRL	MARKER RELEASE
MST	MARKER START
OA, OA1	OFFICE 'A'
OAS, OAS1	OFFICE 'A' SPECIAL MARKER
OB, OB1	OFFICE 'B'
OBS, OBS1	OFFICE 'B' SPECIAL MARKER
OD	ODD
ON, ON1	OFF-NORMAL

*Relay and Tube

SD-25729-01 (CONTD.)
INCOMING REGISTER CIRCUIT
DIAL PULSING

DESIG.	FUNCTIONAL MEANING
OVL	OVERLOAD
P1-6	PULSE COUNTING
P2A, 6A	PULSE COUNTING
RA, RA1	REGISTER ADVANCE
RB, RB1	REGISTER BUSY
REG	REGULAR OR BASIC (Indicates bay for Tandem and Toll)
RLK	RELEASE LINK CHECK
RO	REORDER
*RV	REVERSAL
RV1	REVERSAL
RV2	REVERSAL GUARD
SA0,1	IXX - SERVICE COUNTER
SA4	X0X - SERVICE COUNTER
SAZ	X0X - SERVICE COUNTER
SB0,1,4	XIX - SERVICE COUNTER
SBC	XIX AND XXI - SERVICE COUNTER
SBZ	XIX - SERVICE COUNTER
SC0,1	XXI - SERVICE COUNTER
SUP	SUPPLEMENTARY (Indicates bay for Tandem and Toll)
TA $\frac{2}{5}$	TRANSLATOR 'A' DIGIT
TAA-B	TRANSLATOR 'A' DIGIT HALF
TAN, TAN1	TANDEM TRUNKS
TB $\frac{2}{5}$	TRANSLATOR 'B' DIGIT
TBA-C	TRANSLATOR 'B' DIGIT HALF
TC1,2	TRUNK CUT THROUGH ON COMPLETION
TDL	TOLL CODE DELAY
TF0-9	TRUNK LINK FRAME UNITS DIGIT NUMBER 0-9
*TM	TIME MEASURE
TMA, B	TIME MEASURE AUXILIARY
TOL	TOLL TRUNK
TRL	TROUBLE RELEASE

FUNCTIONAL DESIGNATIONS

SD-25693-02, ISSUE 8

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RM 2-10

ORDER AS BSP ITEM MP-10573

SD - 25730 - 01

MF INCOMING REGISTER CIRCUIT

BESIG.	FUNCTIONAL MEANING
11A, A', B	ONE-ONE AREA DIRECTING CODE
A	A LINE SUPERVISORY RELAY
A $\frac{2}{5}$	"A" DIGIT REGISTER
AB $\frac{2}{5}$	"A" AND "B" OFFICES
ABS	"A" AND "B" SPECIAL MARKER
AS	"A" DIGIT STEERING
B $\frac{2}{5}$	"B" DIGIT REGISTER
BS $\frac{2}{5}$	"B" DIGIT STEERING
C $\frac{2}{5}$	"C" DIGIT REGISTER
CK	CLASS CHECK
CS	"C" DIGIT STEERING
D $\frac{2}{5}$	"D" DIGIT REGISTER
DCK	DOUBLE CONNECTION CHECK
DS	"D" DIGIT STEERING
E $\frac{2}{5}$	"E" DIGIT REGISTER
END	END DIGITS
ES	"E" DIGIT STEERING
EV	EVEN
F $\frac{2}{5}$	"F" DIGIT REGISTER
FG0, 1	FRAME GROUP
FS	"F" DIGIT STEERING
FVD	FIVE DIGITS
G $\frac{2}{5}$	"G" DIGIT REGISTER
GS	"G" DIGIT STEERING
H	HOLD MAGNET
H $\frac{2}{5}$	"H" DIGIT REGISTER
HS	"H" DIGIT STEERING
J $\frac{2}{5}$	"J" DIGIT REGISTER
JS	"J" DIGIT STEERING
K $\frac{2}{5}$	"K" DIGIT REGISTER
KS	"K" DIGIT STEERING
L $\frac{2}{5}$	"L" DIGIT REGISTER
*LR	LINK RELEASE
LS	"L" DIGIT STEERING
LT0-9	LINK TENS DIGIT NUMBER 0-9 (Indicates trunk location on register link bay) FOR TANDEM AND TOLL
LU0-9	LINK UNITS DIGIT NUMBER 0-9 (Indicates trunk location on register link bay) FOR TANDEM AND TOLL

SD - 25730 - 01 (CONTD.)

MF INCOMING REGISTER CIRCUIT

BESIG.	FUNCTIONAL MEANING
M	MONITOR
MB	MAKE BUSY
MRL	MARKER RELEASE
MST	MARKER START
NOE	NO OPERATOR ERROR
OA	OFFICE "A"
OAS	OFFICE "A" SPECIAL
OB	OFFICE "B"
OBS	OFFICE "B" SPECIAL
OD	ODD
ON, ON1	OFF-NORMAL
PCD, PCD1	PULSE CONVERSION DIAL
PCR	PULSE CONVERSION REVERTIVE
RA	REGISTER ADVANCE
RB, RB1	REGISTER BUSY
REG, REG1	REGULAR OR BASIC (Indicates bay for tandem and toll)
RLK	RELEASE LINK CHECK
RO	REORDER
*RV	REVERSAL
SR	SLOW RELEASE (Supervisory)
STS	START STEERING
SUP, SUP1	SUPPLEMENTARY (Indicates bay for tandem and toll)
SYN	SYNCHRONIZING
TAN, TAN1	TANDEM TRUNK
TC1, 2	TRUNK CUT-THROUGH
TEN	TEN FREQUENCY
TF0-9	TRUNK LINK FRAME UNITS DIGIT NUMBERS 0-9
*TM	TIMING
TM1	TIMING
TOL	TOLL TRUNK
TRL	TROUBLE RELEASE

SD - 25731 - 01

REVERTIVE PULSE INCOMING REGISTER

BESIG.	FUNCTIONAL MEANING
AB	"A" AND "B" OFFICES
ABS	"A" AND "B" SPECIAL MARKER
DCK	DOUBLE CONNECTION CHECK
F (Hold)	FRAME TRUNK LINK HOLD MAGNET
FB (Hold)	FINAL BRUSH HOLD MAGNET
FG0, 1	FRAME GROUP
FT (Hold)	FINAL TENS HOLD MAGNET
FU (Hold)	FINAL UNITS HOLD MAGNET
GR	GROUND RETURN
H	HOLD
HIG	HIGH INCOMING GROUP
HM	HOLD MAGNET CONTROL
IB (Hold)	INCOMING BRUSH HOLD MAGNET
IB1	INCOMING BRUSH
*IF	INCOMING FRAME
IF1	INCOMING FRAME
IG (Hold)	INCOMING GROUP HOLD MAGNET
L, LA-E	LINE
*LR	LINK RELEASE
M	MONITOR
MB	MAKE BUSY
MRL	MARKER RELEASE
OA	OFFICE "A"
OAS	OFFICE "A" SPECIAL MARKER
OB	OFFICE "B"
OBS	OFFICE "B" SPECIAL MARKER
ON, ON1	OFF-NORMAL
OVL	OVERLOAD
P1-6	PULSE COUNTING
RA1, 2	REGISTER ADVANCE
RB, RB1	REGISTER BUSY
RLK	RELEASE LINK CHECK
RV1-5	REVERSING
S0-9 (Sel)	SELECT MAGNET
SM	SELECT MAGNET CONTROL
STP	STEPPER
TC1, 2	TRUNK CUT-THROUGH
*TM	TIMING
TMA	TIMING AUXILIARY
TRL	TROUBLE RELEASE
TT	TELLTALE

*Relay and Tube

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R. B. B. FAK. R. E. H.

SD-25732-01

REVERTIVE PULSE OUTGOING SENDER

DESIG.	FUNCTIONAL MEANING
0,1-6,1 ¹ -6 ¹	COUNTING
A $\frac{2}{5}$	'A' DIGIT REGISTER
AF	ADD FIVE
AMA	AUTOMATIC MESSAGE ACCOUNTING
AV,AV1	ADVANCE
B $\frac{2}{5}$	'B' DIGIT REGISTER
BO ¹	BO ¹ COUNTING
C $\frac{2}{5}$	'C' DIGIT REGISTER
CL1-4,2A	CLASS
CP0-2	CODE PATTERNS
CR1,2,4,7	COMPENSATING RESISTANCE
CT	CUT-THROUGH
D $\frac{2}{5}$	'D' DIGIT REGISTER
E $\frac{2}{5}$	'E' DIGIT REGISTER
F $\frac{2}{5}$	'F' DIGIT REGISTER
FO ¹	FO ¹ COUNTING
FO1-3	FUNDAMENTAL OPEN
FS	FULL SELECTOR
FT0-3	FRAME TENS (Line link)
FU $\frac{2}{5}$	FRAME UNITS (Line link)
G $\frac{2}{5}$	'G' DIGIT REGISTER
HG $\frac{2}{5}$	HORIZONTAL GROUP (Line link)
IA	INCOMING ADVANCE
LR,LR1	LINE RELEASE
M	MONITOR
MB $\frac{2}{5}$	MESSAGE BILLING INDEX
MB	MAKE BUSY
MTG	MARGINAL TRUNK GUARD
ND	NO DIGITS
NOB	NON-OBSERVING
OBS	OBSERVING
OF,OF1-4	OVERFLOW
ON, ON1	OFF-NORMAL
RC	REGISTRATION CONTROL
REV	REVERSING
RLT	RELEASE TRANSVERTER
RN $\frac{2}{5}$	RECORDER NUMBER
RO	REORDER

SD-25732-01 (CONTD.)

REVERTIVE PULSE OUTGOING SENDER

DESIG.	FUNCTIONAL MEANING
RP	RING PARTY
S1-6,5A	STEERING
SB	SENDER BUSY
SC	SERVICE CLASS OF CALL
ST7	START SEVEN
STP	STEPPER
STT	START TRANSVERTER
T0-9	TRANSLATOR
TG,TG1	TRUNK GUARD
*TM	TIMING
TM1	TIMING
TP	TIP PARTY
TR	TROUBLE RELEASE TRANSVERTER
TRL	TROUBLE RELEASE
*TTK	TEST TRUNK
TVT	TRANSVERTER TEST
VF0-4	VERTICAL FILE (Line link)
VG $\frac{2}{6}$	VERTICAL GROUP (Line link)

SD-25733-01

PCI OUTGOING SENDER

DESIG.	FUNCTIONAL MEANING
1,2	FIRST AND SECOND PCI PULSE
3,4	THIRD AND FOURTH PCI PULSE
4DG	FOUR DIGITS
5DG	FIVE DIGITS
A $\frac{2}{5}$	'A' DIGIT REGISTER
AC	AUXILIARY CONTROL TO RLT
AMA	AUTOMATIC MESSAGE ACCOUNTING
AS	'A' DIGIT STEERING
AV	ADVANCE
B $\frac{2}{5}$	'B' DIGIT REGISTER
BS	'B' DIGIT STEERING
C $\frac{2}{5}$	'C' DIGIT REGISTER
CI1	CALL INDICATOR
CP $\frac{2}{5}$	CODE PATTERN
CR1,2,4,7	COMPENSATING RESISTANCE
CS	'C' DIGIT STEERING

*Relay and Tube

SD-25733-01 (CONTD.)

PCI OUTGOING SENDER

DESIG.	FUNCTIONAL MEANING
CT	CUT-THROUGH
D $\frac{2}{5}$	'D' DIGIT REGISTER
DS	'D' DIGIT STEERING
E $\frac{2}{5}$	'E' DIGIT REGISTER
EP	END OF PULSING
ES	'E' DIGIT STEERING
F $\frac{2}{5}$	'F' DIGIT REGISTER
FP	FINAL PULSE
FS	'F' DIGIT STEERING
FT0-3	FRAME TENS (Line link)
FU $\frac{2}{5}$	FRAME UNITS (Line link)
G $\frac{2}{5}$	'G' DIGIT REGISTER
GR	GROUND RING
GS	'G' DIGIT STEERING
H $\frac{2}{5}$	'H' DIGIT REGISTER
HG $\frac{2}{5}$	HORIZONTAL GROUP (Line link)
HS	'H' DIGIT STEERING
JS	LAST DIGIT STEERING
L5D	FOUR DIGITS, FIVE DIGITS, OR FOUR DIGITS WITH LETTER
LR,LR1	LINE RELEASE
LST	LETTERED STATIONS
M,M1	MONITOR
MB	MAKE BUSY
MB $\frac{2}{5}$	MESSAGE BILLING INDEX
NF,NF1	NUMBER FIRST
NOB	NON-OBSERVING
OBS	OBSERVING
OF,OF1,4	OVERFLOW
ON,ON1	OFF-NORMAL
PC	PEG COUNT - ASSIGNMENT DELAYS
PG,PG1-3	PULSE GENERATOR
PR	PULSE RING
PT	PULSE TIP
RLT	RELEASE TRANSVERTER
RN $\frac{2}{5}$	RECORDER NUMBER
RO	REORDER
RP	RING PARTY
SB	SENDER BUSY
SC	SERVICE CLASS OF CALL
SF	STATIONS FIRST

SD-25733-01 (CONTD.)

PCI OUTGOING SENDER

DESIG.	FUNCTIONAL MEANING
SP	START PULSING
ST7	START SEVEN
STT	START TRANSVERTER
TG,TG1,2	TRUNK GUARD
TK	TRUNK CHECK
*TM	TIMING
TM1	TIMING
TP	TIP PARTY
TR	TROUBLE RELEASE - TRANSVERTER
TRL	TROUBLE RELEASE
TTK	TEST TRUNK
TVT	TRANSVERTER TEST
VF0-4	VERTICAL FILE (Line link)
VG $\frac{2}{6}$	VERTICAL GROUP (Line link)

FUNCTIONAL DESIGNATIONS

SD-25732-01, ISSUE 12
SD-25733-01, ISSUE 12

SD - 25736 - 01

COIN SUPERVISORY CIRCUIT

DESIG.	FUNCTIONAL MEANING
AL	ALARM LOCK
CB	COIN IN BOX
CC	COIN COLLECT
CK,CK1	CLASS CHECK - CC, CR OR OD
CN	COIN PRESENT
CO	CUT-OFF
CP	COIN POTENTIAL
CR	COIN RETURN
DCK	DOUBLE CONNECTION CHECK
DS	DUMMY
H	HOLD
LA	LINK ALARM
LT	LINE TEST
MB,MB1	MAKE BUSY
NC	NO COIN
OA,OA1	OPERATOR ANSWER
OD	OVERTIME DEPOSIT
ON	OFF-NORMAL
OW	OPERATOR WANTED
R1	RING
RB	RING BACK
*RL	RELEASE
RL1	RELEASE
RLK	RELEASE CHECK
*RS	RESET - TIMING
S	SUPERVISORY
SCR,SCR1	STUCK-COIN RELEASE
SP,SP1	SPLITTING
ST	START
T	TEST
T1,T1-	TIP
*TA	TIMING ALARM
TK	TOTAL CHECK
*TM	TIMING
TM1-4	TIMING

SD - 25739 - 01

OUTGOING TRUNK CIRCUIT

DESIG.	FUNCTIONAL MEANING
CC	COIN CONTROL
*CH	CHARGE
CH1	CHARGE
CN	COIN CLASS
CO	CUT-OFF
CS	CALLED PARTY SUPERVISORY
D	DISCONNECT
F	FRAME (Connects trunk to marker)
MA	AUTOMATIC MESSAGE ACCOUNTING
OF	OVERFLOW
OM	OVERTIME MONITORING
ON	OFF-NORMAL
RL	RELEASE (Thermal delay relay)
ROT	ROTATING MAGNET (Part of 1B timer)
S,S1-3	SUPERVISORY
SP,SP1	SPLITTING
TC	TALKING CHARGE - AMA
TM	TANDEM CALL
TR	TRANSFER (Thermal relay - avoids false overtime)
TT	TRUNK TEST

*Relay and Tube

SD - 25754 - 01

TRANSLATOR CIRCUIT

DESIG.	FUNCTIONAL MEANING
AR	ALARM RELEASE
CH,CH1,2	CHAIN CONTACT CHECK
E -	EMERGENCY TRANSVERTER PREFERENCE
ESW	EVEN SWITCH
G0-19	VERTICAL GROUP NUMBER
GON	VERTICAL GROUP OFF-NORMAL
HN0-9(Tube)	HUNDREDS DIGIT
HNA,B(Tube)	HUNDREDS DIGIT SPARE
OF0-9(Tube)	OFFICE DIGIT
OFA,B(Tube)	OFFICE DIGIT SPARE
OSW	ODD SWITCH
OTR	OPEN CHAIN CONTACT ON TR RELAYS
*SST	SURGE START
*SST1	SURGE START ALTERNATE
SW $\frac{2}{5}$	SWITCH NUMBER (Horizontal group)
T0-9(Tube)	TENS DIGIT
TA,B(Tube)	TENS' DIGIT SPARE
TH0-9(Tube)	THOUSANDS DIGIT
TMB	TRANSLATOR MAKE BUSY
TNO	TEST NON-OPERATE (OPTION UY)
TOF	TEST NON-OPERATE (OPTION UZ)
TOP	TEST OPERATE
TR	TRANSFER CH RELAYS TO EMERGENCY PREFERENCE RELAYS
TR-	TRANSFER TO EMERGENCY' PREFERENCE RELAY
TVI -	TRANSVERTER INCOMING' LEADS
TVO -	TRANSVERTER OUTGOING LEADS
TVP -	TRANSVERTER PREFERENCE
U0-9(Tube)	UNITS DIGIT
UA,B(Tube)	UNITS DIGIT SPARE
VF0-4	VERTICAL FILE NUMBER
W,Z	ALTERNATE' SURGE START
XTB	CROSS ON TB LEAD
XVF	CROSS ON VERTICAL FILE RELAY FOR ONE AND ONE ONLY OPERATED

FUNCTIONAL DESIGNATIONS

SD - 25736 - 01, ISSUE 14
SD - 25739 - 01, ISSUE 15
SD - 25754 - 01, ISSUE 13

NO. 5 CROSSBAR

RM 2-13

SD-25794-01
RP REGISTER CIRCUIT

DESIG.	FUNCTIONAL MEANING
A	SUPERVISORY
AB	OFFICE "A" OR "B"
ABS	OFFICE "A" OR "B" SPECIAL
DCK	DOUBLE CONNECTION CHECK
F(Hold)	FRAME TRUNK LINK HOLD MAGNET
FB(Hold)	FINAL BRUSH HOLD MAGNET
FG0-1	FRAME GROUP
FS	FINDER START
FT(Hold)	FINAL TENS HOLD MAGNET
FU(Hold)	FINAL UNITS HOLD MAGNET
GR	PULSE GENERATOR
H	HOLD
HIG	HIGH INCOMING GROUP
HM	HOLD MAGNET
IB(Hold)	INCOMING BRUSH HOLD MAGNET
IG(Hold)	INCOMING GROUP HOLD MAGNET
L	LINE
LA-B	LINE AUXILIARY
LC-E	PULSE DIVIDER
*LR	LINK RELEASE
M,M1	MONITOR
NB	MAKE BUSY
MRL	MARKER RELEASE
MS	MARKER START
OA	OFFICE "A"
OAS	OFFICE "A" SPECIAL MARKER
OB	OFFICE "B"
OBS	OFFICE "B" SPECIAL MARKER
ON,ON1	OFF-NORMAL
P1-6	PULSE COUNTING
PD	POSITION DISCONNECT
RA1-2	REGISTER ADVANCE
RB	REGISTER BUSY
RLK	RELEASE CHECK
S0-9(Select)	SELECT MAGNET
SM	SELECT MAGNET
SR	SUPERVISORY
STP	STEPPER
TC1,2	TRUNK CUT-THROUGH
*TM	TIME MEASURE
TRL	TROUBLE RELEASE
TT	TELLTALE

SD-25811-01
MF ORIGINATING REGISTER CIRCUIT

DESIG.	FUNCTIONAL MEANING
2P	TWO-PARTY (Class)
11A-D	ONE-ONE PREFIX COUNTER
A $\frac{2}{5}$	"A" DIGIT REGISTER
AK	"A" DIGIT STEERING CHECK
AR	"A" DIGIT REGISTERED
AS	"A" DIGIT STEERING
B $\frac{2}{5}$	"B" DIGIT REGISTER
BS	"B" DIGIT STEERING
BT	BUSY TONE
C $\frac{2}{5}$	"C" DIGIT REGISTER
CI	COIN INTERRUPTER
CLR	COIN LINE RELEASE (Supervisory)
CM3	CALL MARKER (Choice after three digits)
CMA-C	CALL MARKER CHOICE A-C
CN,CN1	COIN STATION (Class)
CNT,CNT1-3	COIN TEST
*CR1,2	COIN RETURN
CR,CR3,4	COIN RETURN
CRA	COIN RETURN
CS	"C" DIGIT STEERING
CT(Tube)	COIN TIMING
CT0-2	CLASS TENS
CU $\frac{2}{5}$	CLASS UNITS
D $\frac{2}{5}$	"D" DIGIT REGISTER
DL,DL1	DELAY (Stations)
DMS	DELAY MARKER START
DS	"D" DIGIT STEERING
*DT	DIGIT TIMING
E $\frac{2}{5}$	"E" DIGIT REGISTER
END	END RELAY
ES	"E" DIGIT STEERING
EV	EVEN
F,F1	FRAME CONNECTOR (Connects to trunk)
F $\frac{2}{5}$	"F" DIGIT REGISTER
FS	"F" DIGIT STEERING

*Relay and Tube

SD-25811-01 (CONTD.)
MF ORIGINATING REGISTER CIRCUIT

DESIG.	FUNCTIONAL MEANING
FST	FALSE START
FT0-3	FRAME TENS
FU $\frac{2}{5}$	FRAME UNITS
G $\frac{2}{5}$	"G" DIGIT REGISTER
GS	"G" DIGIT STEERING
GT,GT1	GROUND TEST
H $\frac{2}{5}$	"H" DIGIT REGISTER
HG $\frac{2}{5}$	HORIZONTAL GROUP
HS	"H" DIGIT STEERING
J $\frac{2}{5}$	"J" DIGIT REGISTER
JS	"J" DIGIT STEERING
KT	KEY TONE
L,LA	LINE
LL $\frac{2}{5}$	LINE LINK
LT,LT1,2	LINE TEST
M	MONITOR
MAN	MANUAL (Class)
NB	MAKE BUSY
MRL	MARKER RELEASE
MST,MST1	MARKER START
OBS	OBSERVING (Service)
OD	ODD
ON,ON1	OFF-NORMAL
OP	OPERATOR
OVL	OVERLOAD
PD	PARTIAL DIGITS
PRL	PRETRANSLATOR RELEASE
PST	PRETRANSLATOR START
PT	PULSE TIMING
RA	REGISTER ADVANCE
RL	RELEASE
RO	REORDER
S1	SLOW RELEASE (Supervisory)
SB0,1	XII SERVICE CODE
SC0,1	XII SERVICE CODE
SD	STATIONS DELAY
SR	SUBSCRIBER RELEASE
SY	SYNCHRONIZING

SD-25811-01 (CONTD.)
MF ORIGINATING REGISTER CIRCUIT

DESIG.	FUNCTIONAL MEANING
TA-	TRANSLATOR "A" DIGIT
TA $\frac{2}{5}$	TRANSLATOR "A" DIGIT
TAA,B	TRANSLATOR "A" DIGIT
TB-	TRANSLATOR "B" DIGIT
TB $\frac{2}{5}$	TRANSLATOR "B" DIGIT
TBA-C	TRANSLATOR "B" DIGIT
TC-	TRANSLATOR "C" DIGIT
*TM	TIME MEASURE
TM1	TIME MEASURE
TMA,B	TIME MEASURE
TP,TP1,2	TIP PARTY
TPA-C	TIP PARTY TEST
*TPT	TIP PARTY TIMING
VF0-4	VERTICAL FILE
VG $\frac{2}{6}$	VERTICAL GROUP
ZO	ZERO OPERATOR

FUNCTIONAL DESIGNATIONS

SD-25794-01, ISSUE 10
SD-25811-01, ISSUE 2

SD-25826-01

INTERMARKER GROUP SENDER CIRCUIT

DESIG.	FUNCTIONAL MEANING	DESIG.	FUNCTIONAL MEANING
4DG	FOUR DIGITS	RLT	RELEASE TRANSVERTER
5DG	FIVE DIGITS	RMB	RING MARGINAL
A $\frac{2}{5}$	'A' DIGIT REGISTER	RN $\frac{2}{5}$	RECORDER NUMBER (For AMA re-cording)
AMA	AUTOMATIC MESSAGE ACCOUNTING	RO	REORDER
AV	ADVANCE	RP	RING PARTY
B $\frac{2}{5}$	'B' DIGIT REGISTER	RS	RING SENSITIVE
C $\frac{2}{5}$	'C' DIGIT REGISTER	SB	SENDER BUSY
CL1-3	CLASS	SC	SERVICE CLASS OF CALL
CP $\frac{2}{5}$	CODE PATTERN	SR	CHECKS FREE NUMBER AND AMA FUNCTIONS
D	RECORDS TRUNK LINK FRAME NUMBER	SRT	SENDER REGISTER TEST
D $\frac{2}{5}$	'D' DIGIT REGISTER	ST7	PROVIDES GROUND ON '7' LEAD (One beyond last digit equipped in sender)
E $\frac{2}{5}$	'E' DIGIT REGISTER	STT	START TRANSVERTER
F $\frac{2}{5}$	'F' DIGIT REGISTER	T	RECORDS TRUNK LINK FRAME NUMBER
FTO-3	FRAME TENS LOCATION (line link)	*TM	TIMING
FU $\frac{2}{5}$	FRAMES UNITS LOCATION (line link)	TM1	TIMING
G $\frac{2}{5}$	'G' DIGIT REGISTER	TMG	TIP MARGINAL
H $\frac{2}{5}$	'H' DIGIT REGISTER	TP	TIP PARTY
HG $\frac{2}{5}$	HORIZONTAL GROUP ASSOCIATION (line link)	TR	TROUBLE RELEASE
J $\frac{2}{5}$	'J' DIGIT REGISTER	TS	TIP SENSITIVE
K $\frac{2}{5}$	'K' DIGIT REGISTER	TVT	TRANSVERTER TEST
L $\frac{2}{5}$	'L' DIGIT REGISTER	VF0-4	VERTICAL FILE LOCATION (Line link)
LSD	LETTERED STATIONS ON FOUR DIGIT AND LETTER BASIS AND FIVE DIGIT NUMBERS	VG $\frac{2}{6}$	VERTICAL GROUP LOCATION (Line link)
LR	LINE RELEASE		
LST	LETTERED STATIONS		
MB	MAKE BUSY		
MB $\frac{2}{5}$	MESSAGE BILLING INDEX		
MRL	MARKER RELEASE		
MTRL	MARKER TROUBLE RELEASE		
ND	NO DIALING		
NOB	NON-OBSERVING		
OBS	OBSERVING		
ON,ON1	OFF-NORMAL		
R	RECORDS TRUNK LINK FRAME NUMBER		

*Relay and Tube

FUNCTIONAL DESIGNATIONS
SD-25826-01, ISSUE 6

NO. 5 CROSSBAR

RM 2-15

BELL TELEPHONE LABORATORIES, INC.

PRINTED IN U.S.A.

ORDER AS BSP ITEM MP-10578

ISSUE 3
DATE 12-22-52
REH.

RECORDER AND RECORDER CONNECTOR CIRCUIT

DESIG.	FUNCTIONAL MEANING
AO-2	'A' DIGIT PERFORATOR MAGNET
AO-2	'A' DIGIT PERFORATOR CHECK RELAY
ADT	ANSWER-DISCONNECT TROUBLE
AT	ADVANCE TAPE
ATS	ADVANCE TAPE START
B $\frac{2}{5}$	'B' DIGIT PERFORATOR MAGNET
B $\frac{2}{5}$	'B' DIGIT PERFORATOR CHECK RELAY
C $\frac{2}{5}$	'C' DIGIT PERFORATOR MAGNET
C $\frac{2}{5}$	'C' DIGIT PERFORATOR CHECK RELAY
C,CA	CONTROL PULSE - MASTER TIMER
CH	CHARGE CONTROL START LEAD
CK	CHECK
D $\frac{2}{5}$	'D' DIGIT PERFORATOR MAGNET
D $\frac{2}{5}$	'D' DIGIT PERFORATOR CHECK RELAY
DL	DISPLAY LOST
DS	DISCONNECT START (Initial entry complete)
DTK,DTKA	DISTRICT OR TRUNK ON 'RC' LEAD
DTN	DISTRICT OR TRUNK NUMBER
E $\frac{2}{5}$	'E' DIGIT PERFORATOR MAGNET
E $\frac{2}{5}$	'E' DIGIT PERFORATOR CHECK RELAY
F $\frac{2}{5}$	'F' DIGIT PERFORATOR MAGNET
F $\frac{2}{5}$	'F' DIGIT PERFORATOR CHECK RELAY
H (Step)	HUNDREDS MAGNET (Minutes tens stepping)
H	HUNDREDS RELAY (Minutes syn.check)
HH	HUNDREDS HELPER
HP,HPA	HOURLY RECORD PREFERENCE
HR1-3	HOURLY ENTRY
HRA	HOURLY ENTRY ALARM
HRT	HOURLY TROUBLE
HS	HOURLY START
HTA	HOURLY TIME AUXILIARY
IP,IPA	IDENTIFIER PREFERENCE (District junctor or trunk)
KD	KNOCK DOWN (Paper advance check)
LC	LINE COMPLETED
M	MINUTES
MB	MAKE BUSY
MBJ	MAKE BUSY JACK (Record on tape)
MBR	MAKE BUSY REMOVED (Record on tape)

DESIG.	FUNCTIONAL MEANING
MTP	MASTER TIMING CIRCUIT PREFERENCE
MTR	MASTER TIMER RELEASE
NPA	NO PAPER ALARM
NS	NO SERVICE CALLS
ON,ON1,2	OFF-NORMAL
OTK	'OT' LEAD CHECK
OTO	TIMED RELEASE SIGNAL ON 'OT' LEAD
PA	PERFORATOR ADVANCE
PAC	PAPER ADVANCE CHECK MAGNET
PAM	PAPER ADVANCE MAGNET
PR1-3	PERFORATOR RELEASE
PTC	PERFORATOR TIMING CONTROL
PTO	PERFORATOR TIMING OPERATE
PTS	PERFORATOR TROUBLE START
RCCK	'RC' LEAD CHECK
RCK	RECORDER CHECK
RD	RECORDER DISCONNECT
RG	RECORDER GROUP
RGT	RECORDER GROUP TRANSFER
RN	RECORDER NUMBER
RNT	RECORDER NUMBER TRANSFER
RT,RT1	RECORDER TEST
SP	SPLICE
SYC	SYNCHRONIZE
T(Step)	TENS MAGNET (Minutes unit stepping)
T	TENS RELAY (Minutes unit syn. check)
TA-F	TROUBLE TIMING CONTROL
TBL	TROUBLE
TC	TRANSVERTER CONNECTOR
TC1	TALKING CHARGE TROUBLE CONTROL
TCT	TALKING CHARGE TROUBLE
TEC	TROUBLE ENTRY CONTROL
TH	TENS HELPER
TI,TIA,B	TROUBLE INDICATOR
TL	TENS LOCK IDENTIFIER
TM	TIMING TROUBLE
TN,TN1-12	TRANSFER (From emergency to regular recorder)
TNS	TRANSFER (From regular to emergency recorder)
TP	TRANSVERTER CIRCUIT PREFERENCE
TPC	TROUBLE PERFORATOR CONTROL
TTA	TRUNK TEST AUXILIARY
TTIB	TROUBLE INDICATOR OR RECORDER BUSY

DFSIG.	FUNCTIONAL MEANING
TTK	TEST TRUNK CHECK
TVM,TVM1	TRANSVERTER CLASS (Tested by master timer)
U (Step)	UNITS MAGNET (Tenths of minute stepping)
U	UNITS RELAY (Tenths of minute syn. check)
UH	UNITS HELPER
UL	UNITS LOCK IDENTIFIER
W	PAPER ADVANCE CHECK
XCO	CROSS ON 'CO' LEAD
XP,XP1	CROSS ON 'P' LEAD
XPA	CROSS ON 'P' LEAD
XR	CROSS ON 'RB' LEAD
XT	CROSS ON 'T' LEAD
XTC	CROSS ON 'TC' LEAD
XU	CROSS ON 'U' LEAD
Z	PAPER ADVANCE CHECK
ZD	(Z) RELAY DOWN
ZU	(Z) RELAY UP

ISSUE 3 ANC
DATE 12-22-52
R.E.H.

SD-96285-01

"B" SWITCHBOARD SENDER CIRCUIT
SWITCHBOARD PART

DESIG.	FUNCTIONAL MEANING
0-6	PULSE COUNTING
1'-6'	PULSE COUNTING
B(Magnet)	"B" SELECTOR MAGNET
BO	BREAK FUNDAMENTAL (Selection complete)
C	CONNECTOR
CR	CURRENT REVERSAL
DS	DISCONNECT. SENDER
DT	DOUBLE TEST
FO	SELECTION ADVANCE
FO2,3	FUNDAMENTAL OPEN
H1-4	HUNDREDS REGISTER
K1-3	KEYING BY OPERATOR
LD	LINE DISCHARGE
OA,OAP	OFFICE "A"
OB,OBP	OFFICE "B"
ON1,2	OFF NORMAL
OP	OFFICE PRESELECTION "A" OR "B"
P	POSITION HUNT
PB	POSITION BUSY OR VACATED
PF,PF1	POSITION FOUND
PM1,2	POLARITY MARKER
RA	REGISTRATION ADVANCE
RC	RELAY CONTROL (Pulse counting)
RO,RO1	REORDER
RR	RELEASE REGISTER RELAYS
S1-S1'	INCOMING BRUSH SELECTION
S2-S2'	INCOMING GROUP SELECTION
S3-S3'	FINAL BRUSH SELECTION
S4-S4'	FINAL TENS SELECTION
S5-S5'	FINAL UNITS SELECTION
SP	START PULSING
SR	START FINDER
STP	STEPPER
T1-4	TENS REGISTER
TH1-4	THOUSANDS REGISTER
THA-B	THOUSANDS REGISTER
TR1-3	TRANSFER (Registration relays)
TRA-D	TRANSFER (Registration relays)
U1-4	UNITS REGISTER

ISSUE	1	GG	2	ANC	3	ANC
DATE	1-22-51	3-19-52	12-22-52			

R.B.B. F.A.K. R.E.H.

FUNCTIONAL DESIGNATIONS
SD-96285-01, ISSUE 12

TROUBLE ANALYSIS DATA
INDEX OF TROUBLE RECORDER CARD PUNCHES

PUNCH DESIGNATION	PUNCH LOCATION			CARD COORDINATES	FUNCTIONAL MEANING
	OS	FS	SD#		
2P			12-26001	S3 7	TWO PARTY
CHO-9	708-1		21-26001	R7 50-59	CHANNEL
CHE	710-1		20-26001	S8 35	CHANNEL END (JXPI OPERATED)
CK	702-1		3-26001	S8 41	CHECK
CKG			23-26001	S8 31	CHECK GROUND CLOSURE
CN			12-26001	R4 31	COIN CALL
CN-	701-1		2-26022	S6 10-13	CONNECTOR NUMBER
CON			24-26001	S7 44	CONTINUITY
CSO-29	705-1		12-26001	S2 30-59	CLASS OF SERVICE
CTO-2	705-1		12-26001	R1 25-27	CLASS TENS
CU ² / ₅	705-1		12-26001	R0 25-29	CLASS UNITS
D			26-26001	S7 1	DIAL PULSE FRAME
DCT			23-26001	S7 46	DOUBLE CONNECTION TEST
DCT1			23-26001	S7 47	DOUBLE CONNECTION TEST NO. 1
DIS1			23-26001	S7 54	DISCONNECT NO. 1
DRO-9	631-1(2)		25805	S8 19-29	DISPLAY REGISTERED
DRTO-1	631-1(2)		25805	S7 19-20	DISPLAY REGISTERED TENS
DTK			11-26001	S8 55	DIAL TONE CHECK
EF	707-2		16-26001	S1 59	EXTENSION FRAME
FAK	710-1		22-26001	R8 50	FRAME "A" APPEARANCE CHECK
FCG			24-26001	S5 57	FALSE CROSS AND GROUND

TROUBLE ANALYSIS DATA
INDEX OF TREL REC'DR CARD PUNCHES
DIAL TONE CALL

RM 701-1

6 SHEETS, SHEET 1

NO.5 CROSSBAR

TROUBLE ANALYSIS DATA
INDEX OF TROUBLE RECORDER CARD PUNCHES (CONTD.)

PUNCH DESIGNATION	PUNCH LOCATION			CARD COORDINATES	FUNCTIONAL MEANING
	OS	FS	SD#		
FCK	702-1		2-26001	S8 39	FRAME CONNECTOR CHECK
FM	708-1		21-26001	S8 52	FAILURE TO MATCH
FML	702-1		2-26001	S8 42	FRAME MEMORY LOCK
FRO-9	701-1		2-26022	S6 0-9	CONNECTOR FRAME
FSO-19	702-1		3-26001	S1 30-49	FRAME SELECTION
FTO-3			10-26001	R1 0-3	FRAME TENS
FT'0-3			10-26001	RO 0-3	FRAME TENS PRIME
FTCK	702-1		2-26001	S8 40	FRAME TEST CHECK
FTK1			8-26001	S7 33	VERTICAL FILE TEST CHECK
FTTO-3			10-26001	S4 30-33	FRAME TENS TEST
FU $\frac{2}{5}$			10-26001	R1 4-8	FRAME UNITS
FU' $\frac{2}{5}$			10-26001	RO 4-8	FRAME UNITS PRIME
FUTO-9			10-26001	S4 34-43	FRAME UNITS TEST
GLH	710-1		20-26001	S7 43	GROUND LINE HOLD MAGNET
GT2	710-1		20-26001	S7 45	GROUND TEST AUXILIARY
GTL			13-26001	S8 33	GROUND TRANSMITTING LEADS
HG' $\frac{2}{5}$			9-26001	RO 15-19	HORIZONTAL GROUP
HGK			7-26001	S7 36	HORIZONTAL GROUP CHECK
HGTO-9			7-26001	S3 45-54	HORIZONTAL GROUP TEST
HMS1	710-1		20-26001	S7 39	HOLD MAGNET START NO. 1
HTK1			7-26001	S7 32	HORIZONTAL GROUP TEST CHECK

TROUBLE ANALYSIS DATA
INDEX OF TREL REC'DR CARD PUNCHES
DIAL TONE CALL

TROUBLE ANALYSIS DATA
INDEX OF TROUBLE RECORDER CARD PUNCHES (CONTD.)

PUNCH DESIGNATION	PUNCH LOCATION			CARD COORDINATES	FUNCTIONAL MEANING
	OS	FS	SD#		
HTR			25-26001	S7 42	HEAVY TRAFFIC
JCO-9	707-1(2)		17-26001	R6 30-39	JUNCTOR CUT-IN
JCK	708-1		21-26001	S8 47	JUNCTOR CONNECTOR CHECK
JGO-4	706-1		16-26001	R6 40-44	JUNCTOR GROUP
LCO-9	710-1		1-26032	S0 50-59	LINK CONNECTOR
LCK	710-1		19-26001	S8 46	LINK CONNECTOR CHECK
LDT			25-26001	S7 59	LONG DELAY TIMER
LFK	703-1		11-26001	S7 35	LINE LINK FRAME CHECK
LK	707-1(2)		17-26001	S8 49	LEFT SIDE CHECK
LL ² / ₅			9-26001	S4 25-29	LINE LINKAGE
LTR	710-1		20-26001	S7 41	LIGHT TRAFFIC
LV2	710-1		1-26032	R8 52	LEVEL
LXPI	710-1		20-26001	S8 36	LINE CROSSPOINT NO. 1
MAK1	702-1		3-26001	S8 43	MARKER CONNECTOR CUT-IN
MAN			12-26001	S3 6	MANUAL
MKR	631-1(2)		25805	S8 15	MARKER
MF			26-26001	S7 2	MULTIFREQUENCY PULSE FRAME
MLF			26-26001	S7 0	MIXED LINE FRAME
MRL			26-26001	S7 55	MARKER RELEASE
OBS1			8-26001	S4 16	SERVICE OBSERVATION NO. 1
OBS2			8-26001	S4 17	SERVICE OBSERVATION NO. 2

TROUBLE ANALYSIS DATA
INDEX OF TRBL REC'DR CARD PUNCHES
DIAL TONE CALL

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NO.5 CROSSBAR

TROUBLE ANALYSIS DATA
INDEX OF TROUBLE RECORDER CARD PUNCHES (CONTD.)

PUNCH DESIGNATION	PUNCH LOCATION			CARD COORDINATES	FUNCTIONAL MEANING
	OS	FS	SD#		
PO-9	706-1	14-26001		R6 50-59	PATTERN NUMBER
PA	706-1	18-26001		R6 47	PATTERN A
PB		18-26001		R6 48	PATTERN B
PC		18-26001		R6 49	PATTERN C
PNR	706-1	18-26001		R6 46	PATTERN NORMAL
PR	706-1	16-26001		S1 57	PAIRED FRAME
RA		27-26001		S8 54	ROUTE ADVANCE
RCY		27-26001		S8 53	RECYCLE
RF	707-2	16-26001		S1 58	REGULAR FRAME
RK	707-1(2)	17-26001		S8 50	RIGHT SIDE CHECK
RK1		13-26001		S8 56	REGISTRATION CHECK NO. 1
RK2		13-26001		S8 57	REGISTRATION CHECK NO. 2
RK3		13-26001		S8 58	REGISTRATION CHECK NO. 3
SDT		25-26001		S7 58	SHORT DELAY TIMER
SF	706-1	16-26001		S1 56	SINGLE FRAME
SL	710-1	20-26001		S7 40	SLEEVE (TRUNK LINK FRAME)
SNK		27-26001		S8 59	SELECTION AND NORMAL CHECK
SQA		15-26001		S5 58	SEQUENCE ADVANCE
STP1	708-1	21-26001		R5 30	JUNCTOR STEP NO. 1
STP2	708-1	21-26001		R5 31	JUNCTOR STEP NO. 2
TBO	704-1	4-26001		S1 50	TRUNK BLOCK
TBK	704-1	4-26001		S8 44	TRUNK BLOCK CHECK

TROUBLE ANALYSIS DATA
INDEX OF TROUBLE RECORDER CARD PUNCHES (CONTD.)

PUNCH DESIGNATION	PUNCH LOCATION			CARD COORDINATES	FUNCTIONAL MEANING
	OS	FS	SD#		
TC1			28-26001	S8 34	TRAFFIC CONTROL NO. 1
TCHK	706-1		18-26001	S8 48	TEST CHANNEL CHECK
TGO			26-26001	R8 30	TRUNK GROUP
TK	708-1		21-26001	S8 51	TEST CHECK
TR2			26-26001	S4 15	SECOND TRIAL
TRK			26-26001	S4 14	FIRST TRIAL CHECK
TRL			26-26001	S7 52	TROUBLE RELEASE
TRS			26-26001	S8 12	TRANSFER START
TSO-9	704-1		4-26001	S0 30-39	TRUNK SELECTED
TSE	704-1		5-26001	S8 45	TRUNK SELECTION END
VF'0-4			9-26001	R0 20-24	VERTICAL FILE
VFTO-4	705-1		8-26001	S3 55-59	VERTICAL FILE TEST
VG' $\frac{2}{6}$			9-26001	R0 9-14	VERTICAL GROUP PRIME
VGTO-11			6-26001	S3 30-41	VERTICAL GROUP TEST
VTK1			6-26001	S7 31	VERTICAL GROUP TEST CHECK
WT			25-26001	S7 57	WORK TIMER
XBT			30-26001	S5 53	CROSS BUSY TONE
XCH			30-26001	S6 57	CROSS CHANNEL TEST
XCS			30-26001	S5 32	CROSS CLASS OF SERVICE
XF			30-26001	S6 50	CROSS FRAME

TROUBLE ANALYSIS DATA
INDEX OF TRBL REC'DR CARD PUNCHES
DIAL TONE CALL

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NO.5 CROSSBAR

TROUBLE ANALYSIS DATA
INDEX OF TROUBLE RECORDER CARD PUNCHES (CONTD.)

PUNCH DESIGNATION	PUNCH LOCATION			CARD COORDINATES	FUNCTIONAL MEANING
	OS	FS	SD#		
XHG			30-26001	S5 30	CROSS HORIZONTAL GROUP
XJC			30-26001	S6 42	CROSS JUNCTOR CONNECTOR LEADS
XJG			30-26001	S6 43	CROSS JUNCTOR GROUP LEADS
XJS			30-26001	S6 44	CROSS JUNCTOR SELECT MAGNETS
XLC			30-26001	S6 47	CROSS LINK CONNECTOR
XLG			30-26001	S5 31	CROSS LINE GROUP
XLR			30-26001	S6 45	CROSS LEFT AND RIGHT SIDES
XLS			30-26001	S5 33	CROSS LINE SELECT MAGNETS
XLV			30-26001	S6 48	CROSS LEVEL LEADS
XPG			30-26001	S5 44	CROSS PATTERN GROUP
XSL			30-26001	S6 51	CROSS SLEEVE TRUNK
XTC			30-26001	R1 48	CROSS TRUNK CONTROL
XTCL			30-26001	S5 50	CROSS TRAFFIC CONTROL AUXILIARY
XTGL			30-26001	S6 41	CROSS TRUNK GROUP LEADS
XTRK			30-26001	S5 51	CROSS FIRST TRIAL CHECK LEAD
XTRL			30-26001	S5 52	CROSS TROUBLE RELEASE
XTS			30-26001	S6 46	CROSS TRUNK SWITCH SELECT MAGNETS
XTSL			30-26001	S6 52	CROSS TRUNK SELECTION
XVGA			30-26001	S6 58	CROSS VERTICAL GROUP A
XVGB			30-26001	S6 59	CROSS VERTICAL GROUP B

PART 1 - CLASS CHECK ON ORIGINATING CONNECTIONS

TRUNK		CHARGE OR CLASS INFORMATION	MARKER TO TRUNK LEADS GROUNDED	TRUNK RELAY	MARKER CLASS RELAYS OPERATED	MARKER ROUTE SERIES RELAY	MARKER CLASS CHECK RELAY	CARD PUNCHES	NOTES
1. 1AO Flat	SD-26060-01	No Charge	None	None	None	NCNC	NOC	▼ NOC	
2. 1AO Flat & AMA	SD-26061-01	No Charge (Flat Rate Call)	None	None	None	NCNC	NOC	▼ NOC	
3. 1AO " " "	"	AMA Charge Call	None	None	TP, TPK or RP, RPK	MBS-1	CLK	▼ CLK	1
4. 1AO Mess. Rate	SD-26062-01	Mess. Reg. Charge (Ring Party)	TC	MRP	TC	TCNC	CLK	▼ TC ▼ CLK	
5. 1AO " "	"	" " " (Tip Party)	TC & TP	TP & MRP	TC & TP & TPK	TCNC	CLK	▼ TC ▼ TP' ▼ CLK	
6. 1AO Coin	SD-26064-01	Coin Charge Call	TC	TC	TC	TCNC	CLK	▼ TC ▼ CLK	2
7. OGT Flat Rate & AMA	SD-26085-01	No Charge	None	None	None	NCNC	NOC	▼ NOC	
8. " " " " "	"	AMA Charge	None	None	None	MBS-	CLK	▼ CLK	1
9. OGT Mess. Rate	SD-26086-01	No Charge (Flat Rate Call)	None	None	None	NCNC	NOC	▼ NOC	
10. " " "	"	Mess. Reg. Charge (Ring Party)	TC	TCM	TC	TCNC	CLK	▼ TC ▼ CLK	
11. " " "	"	" " " (Tip Party)	TC & TP	TCM & TP	TC & TP & TPK	TCNC	CLK	▼ TC ▼ TP' ▼ CLK	
12. OGT Coin	SD-26087-01	Coin Charge	CN	None	CNC	NCCN	CLK	▼ CN ▼ CLK	3
13. " "	"	" "	None	None	None	NCNC	NOC	▼ NOC	3
14. Recdng. Compltg., SPCl Srvc., V.C. Intc. (Non-Coin)	SD-26090-01	No Class of Service Discrimi- nation	None	None	None	NCNC	NOC	▼ NOC	
15. " " " " "	"	Class of Service Tone	TC	TC	TC	OPS-	CLK	▼ OPR ▼ TC ▼ CLK	4
16. Recdng. Compltg., SPCl Srvc., V.C. Intc. (Coin)	SD-26091-01	No Class of Service Discrimi- nation	None	None	None	NCNC	NOC	▼ NOC	
17. " " " " "	"	Class of Service Tone	TC	TC	TC	OPS-	CLK	▼ OPR ▼ TC ▼ CLK	4
18. Comb. Tone Non-Coin	SD-26132-01	Line Busy	TC	LB	TC	BL	CLK	▼ TC ▼ LB ▼ CLK	
19. " " " "	"	Vac. Code or Partial Dial	TP	VP	TPK	VP	CLK	▼ TP' ▼ CLK	
20. " " " "	"	Overflow	None	None	None	PBY	NOC	▼ NOC	
21. Comb. Tone Coin	SD-26133-01	Line Busy	TC	LB	TC	BL	CLK	▼ TC ▼ LB ▼ CLK	
22. " " "	"	Vac. Code or Partial Dial	TP	VP	TPK	VP	CLK	▼ TP' ▼ CLK	
23. " " "	"	" " " " "	None	None	None	PBY	NOC	▼ NOC	
24. Permanent Sig. Holding	SD-26134-01	Perm. Sig. PBX	TC	PB	TC	PPX	CLK	▼ TC ▼ CLK	
25. " " "	"	" " Coin	TP	CN	TPK	PCN	CLK	▼ TP' ▼ CN ▼ CLK	
26. " " "	"	" " Non-Coin, Non-PBX	None	None	None	PNC	NOC	▼ NOC	

ROUTE SERIES RELAY AND
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PART 1 - CLASS CHECK ON ORIGINATING CONNECTIONS

TRUNK		CHARGE OR CLASS INFORMATION	MARKER TO TRUNK LEADS GROUNDED	TRUNK RELAY	MARKER CLASS RELAYS OPERATED	MARKER ROUTE SERIES RELAY	MARKER CLASS CHECK RELAY	CARD PUNCHES	NOTES
27. Common Overflow	SD-26131-01	Overflow Tone	None	None	None	CAA	NOC	▼NOC	
28. " "	"	Permanent Sig. Tone	TC	PS	TC	CAA	CLK	▼TC ▼CLK	
29. Auxiliary OGT	SD-26111-01	From Subscriber (AMA Charge)	None	None	None	MBS-	CLK	▼CLK	1
30. " "	"	From Incoming Tandem Trunk	None	None	None	NCNC	NOC	▼NOC	
31. " "	"	From Incoming Toll Trunk	RC	TO	TC	TOS	CLK	▼TC ▼CLK	
32. Intermarker Group Sub. to Sub. Flat Rate	SD-26140-01	No Charge	None	None	None	NCNC	NOC	▼NOC	
33. Intermarker Group Sub. to Sub. Flat & AMA	SD-26141-01	No Charge	None	None	None	NCNC	NOC	▼NOC	
34. " " " " " " "	"	AMA Charge	None	None	None	MBS-	CLK	▼CLK	1
35. Intermarker Group Sub. to Sub. Coin	SD-26142-01	Coin Charge	None	None	None	NCNC	NOC	▼NOC	6
36. Intermarker Group Sub. to Sub. Message Rate	SD-25839-01	Mess. Reg. Charge (Ring Party) " " " (Tip Party)	TC TC & TP	TCM TCM & TP	TCL TC,TP,TPK	TCNC TCNC	CLK CLK	▼TC ▼CLK ▼TC ▼TP' ▼CLK	
37. Intermarker Group Sub. to Trunk Flat & AMA	SD-26145-01	No Charge	None	None	None	NCNC	NOC	▼NOC	
38. " " " " " " "	"	AMA Charge	None	None	None	MBS-	CLK	▼CLK	1
39. Intermarker Group Sub. to Trunk Coin	SD-26147-01	Coin Charge	None	None	None	NCNC	NOC	▼NOC	3
40. " " " " " "	"	" "	CN	None	CNC	NCCN	CLK	▼CLK	?

NOTES

- (1) On calls from tip party of 2-party lines, TP in marker operates from orig. reg. In all other cases, RP in marker operates. Marker sends this information to sender and makes class check.
- (2) This trunk does not require coin signal but does require a charge signal. Therefore the route series relay TCNC is used.

- (3) In this trunk, the CN lead is optional. Route series relay NCCN is used when CN lead is provided. NCNC is used when not provided. NCCN grounds CN lead, NCNC does not. TC lead does not need grounding because this trunk charges every call. For this reason, NCCN is used in place of TCCN; or NCNC is used in place of TCNC.

- (4) The class of service tone feature is an option of this trunk. Tone is sent to operator to indicate certain classes of service.
- (5) CAA relay does not ground leads to trunk unless call has route advanced from perm. sig. trunk. In this case, operated CAA and either PPX, PCN, or PNC will ground TC lead.
- (6) This trunk handles coin calls only. No "CN" signal is needed. Every call is charged. No talk charge (TC) signal is needed.

ROUTE SERIES RELAY AND
CLASS INFORMATION TABLES

PART 2 — ROUTE SERIES RELAY TABLE

<u>PUNCHING</u>	<u>ROUTE SERIES RELAY</u>	<u>USE</u>	<u>LEADS TO TRUNK GROUNDED</u>	<u>NOTES</u>
NN	NCNC	When trunk requires no signals from marker.	None	
NC	NCCN	When trunk requires a coin class signal.	CN	
TC	TCNC	When trunk requires a charge signal on a charge call.	TC	
TN	TCCN	When trunk requires charge and coin class signals.	TC & CN	
MBS-0	MBS-0	For an AMA test call or AMA free call.	None	
MBS1-8	MBS1-8	For different charge units on AMA bulk billed (2-line entry) calls.	None	
MBS-9	MBS-9	For toll charge AMA detailed billing (4-line entry) calls.	None	
PP	PPX	Permanent signal PBX subscriber.	TC	
PM	PCN	" " coin " .	TP	
PN	PNC	" " non-PBX, noncoin subs.	None	
TO	TOS	When trunk should return toll type supervision.	RC	
CA	CAA	Catch all relay for last alternate route.	None	5